DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 18-120936-LO

Project Name/Address: Vuemont HOA VMP 16980 SE 45th St, 17550 SE 45th St, and 4641 171st Ave SE

Planner: David Wong

Phone Number: 425-452-4282

Minimum Comment Period: 11/01/2018

Materials included in this Notice:

☒ Blue Bulletin
☒ Checklist
☒ Vicinity Map
☒ Plans
☐ Other:

OTHERS TO RECEIVE THIS DOCUMENT:
☒ State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
☐ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
☒ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
☒ Attorney General ecyolyef@atg.wa.gov
☒ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

SEPA Checklist Reviewed By:
David Wong on 10/12/18

DEVELOPMENT SERVICES DEPARTMENT
450 110TH AVENUE NE
BELLEVUE, WA 98009-9012

SEPA Environmental Checklist

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit the Land Use Desk in the Permit Center between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4) or call or email the Land Use Division at 425-452-4188 or landusereview@bellevuewa.gov. Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

Purpose of checklist:
The City of Bellevue uses this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:
This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies and reports. Please make complete and accurate answers to these questions to the best of your ability in order to avoid delays.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

PLEASE REMEMBER TO SIGN THE CHECKLIST. Electronic signatures are also acceptable.

Received
AUG 13 2018
Permit Processing

A. Background [help]

1. Name of proposed project, if applicable: [help]
   Click here to enter text.
   Vuemont Vista HOA Vegetation Management Plan
2. Name of applicant: [help]
   Click here to enter text.
   Vuemont HOA
3. Address and phone number of applicant and contact person: [help]
   Click here to enter text.
   4421 173rd Ave SE, Bellevue, 98006 Katie Teplicky
4. Date checklist prepared: [help]
   Click here to enter a date.
   8/7/18
5. Agency requesting checklist: [help]
   City of Bellevue
6. Proposed timing or schedule (including phasing, if applicable): [help]
   Click here to enter text.
   Work to be completed late fall / early summer
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
   Click here to enter text.
   No
8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
   Vegetation Management Plan. Addendum & Wetland Report
9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]
   Click here to enter text.
   None.
10. List any government approvals or permits that will be needed for your proposal, if known. [help]
    Click here to enter text.
    No
11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]
    Click here to enter text.
    Reapprove VMP w/ addendum, new area, and new wetlands info for new area.
12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]
    Click here to enter text.
    See page 1 of VMP for this info (attached)

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Figure 1-2. Vuemont Native Growth Protection Area Parcels.

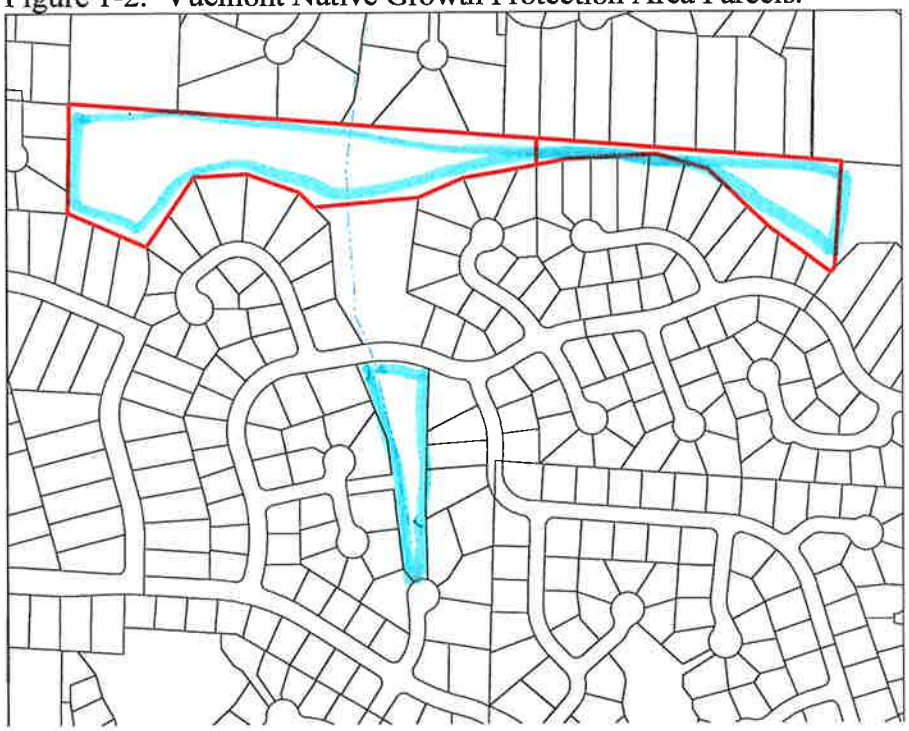

Figure 1-3. Vuemont Development, Divisions 1 and 2

2 EXISTING SITE CONDITIONS

2.1 Development

The Vuemont Vista development was approved by King County in July 1981, with complete build-out of the first phase occurring in 1986. Homes immediately adjacent to the NGPA tracts are located at the top of a hill slope that creates an opportunity for

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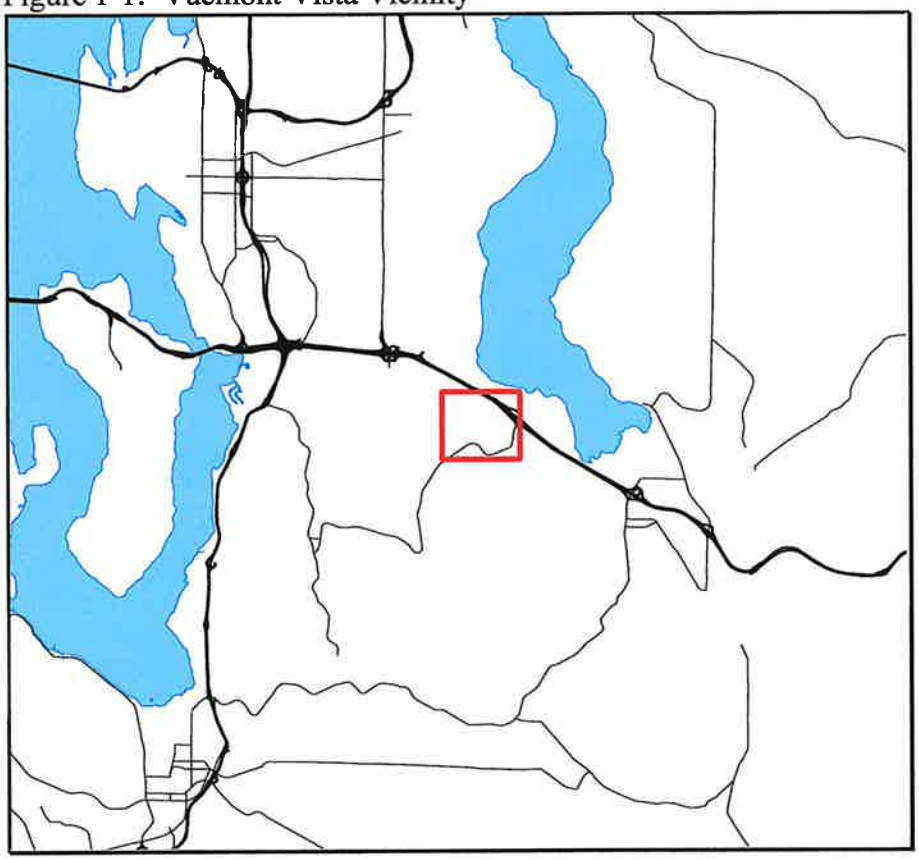
1 INTRODUCTION AND SITE DESCRIPTION

The purpose of this plan is to describe a long-term strategy for management of vegetation and scenic resources on 10 acres of privately owned land in the Vuemont Vista subdivision. The existing environmental resources on the site are described. Goals, objectives, and desired future conditions of the overall site within the subject parcels are defined, along with treatment recommendations to achieve the desired future conditions.

The Vuemont Vista ("Vuemont") development is located in southeast Bellevue, immediately south of Interstate 90 and east of Lakemont Blvd, on a hill overlooking Lake Sammamish (Figure 1-1).

Figure 1-1. Vuemont Vista Vicinity



The subject property consists of two contiguous tax parcels that form the northern boundary of the Vuemont development (Figure 1-2). Vuemont Vista Div. 1 Tract A (Parcel # 8965501000) is located adjacent to home sites on the north side of 170th Ave. SE and 173rd Ave SE. Vuemont Vista Div. 2 Tract A (Parcel # 8965510335) is located adjacent to home sites on the north side of 175th Place SE (Figure 1-3). The storm water retention pond and surrounding area to the South of Tract A, between 170th and 173rd Ave. SE, is owned and managed by the City of Bellevue.

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B. Environmental Elements [help]

1. Earth [help]

a. General description of the site: [help] (select one): ☐Flat, ☐rolling, ☐hilly, ☒steep slopes, ☐mountainous, other: Click here to enter text.

b. What is the steepest slope on the site (approximate percent slope)? [help]
Click here to enter text. 30-50%, per page 5 of VMP

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]

Beausite gravelly sandy loam (BeC & BeD)

Alderwood and Kitsap soils (AkF)

Click here to enter text. See page 4-5 of VMP, and page 3 of Wetlands Report

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]
Click here to enter text. See page 4 of VMP

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]
Click here to enter text. None proposed.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]
Click here to enter text. Not with work planned and lop & scatter technique/ replanting.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]
Click here to enter text. None

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]
Click here to enter text. Lop & scatter/replanting.

Erosion Control regulated by BCC 23.76

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]
Click here to enter text. None

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]
Click here to enter text. No

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]
Click here to enter text. N/A

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3. Water [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]
Click here to enter text.
Yes, Lake Sammamish.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]
Click here to enter text.
Yes, see site map referred to in #12

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]
Click here to enter text.
None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]
Click here to enter text.
NO.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]
Click here to enter text.
No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]
Click here to enter text.
No.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]
Click here to enter text.
No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]
Click here to enter text.
None

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]
Click here to enter text.
N/A

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Addendum to Plant List on in VMP Review

Appendix B

Plant List – Appropriate Native Shrub Species for Upper Zone 3

Common Name	Species	Vegetative Characteristics
Vine maple	*Acer cininatum*	Tall deciduous shrub/wildlife
Beaked hazelnut/filbert	*Corylus cornuta*	Tall deciduous shrub/wildlife
Low Oregon grape	*Mahonia nervosa*	Low growing evergreen shrub.
Snowberry	*Symphoricarpos albus*	Medium height deciduous shrub.
Red flowering currant	*Ribes sanguineum*	Medium height deciduous shrub.
Indian plum	*Oemleria cerasiformis*	Medium height deciduous shrub.
Kinnikinnick	*Arctostaphylos uva-ursi*	Low growing evergreen shrub.
Salal	*Gaultheria shallon*	Low growing evergreen shrub.
Oceanspray	*Holodiscus discolor*	Medium height deciduous shrub.
Thimbleberry	*Rubus parviflorus*	Medium height deciduous shrub.
Red osier dogwood	*Cornus stolonifera*	Medium-Tall deciduous shrub.
Mock orange	*Philadelphus lewisii*	Medium-Tall deciduous shrub.

Plant List – Appropriate Native Species for Lower Zone 3 and Zone 4

Common Name	Species	Vegetative Characteristics
Vine maple	*Acer cininatum*	Tall deciduous shrub/wildlife
Beaked hazelnut/filbert	*Corylus cornuta*	Tall deciduous shrub/wildlife
Low Oregon grape	*Mahonia nervosa*	Low growing evergreen shrub.
Serviceberry	*Amelanchier alnifolia*	Tall deciduous shrub/wildlife
Snowberry	*Symphoricarpos albus*	Medium height deciduous shrub.
Red flowering currant	*Ribes sanguineum*	Medium height deciduous shrub.
Tall Oregon grape	*Mahonia aquifolium*	Medium height deciduous shrub.
Indian plum	*Oemleria cerasiformis*	Medium height deciduous shrub.
Salal	*Gaultheria shallon*	Low growing evergreen shrub.
Oceanspray	*Holodiscus discolor*	Medium height deciduous shrub.
Thimbleberry	*Rubus parviflorus*	Medium height deciduous shrub.
Shore pine	*Pinus contorta*	Medium height evergreen tree.
Western red cedar	*Thuja plicata*	Shade tolerant evergreen tree.
Western hemlock	*Tsuga heterophylla*	Shade tolerant evergreen tree.
Pacific dogwood	*Cornus nuttallii*	Medium to large deciduous tree.
Shore pine	*Pinus contorta*	Medium height evergreen tree.

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2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
Click here to enter text.
No.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]
Click here to enter text.
No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]
Click here to enter text.
None

4. Plants [help]

a. Check the types of vegetation found on the site: [help]
☒deciduous tree: alder, maple, aspen, other: Click here to enter text.
☒evergreen tree: fir, cedar, pine, other: Click here to enter text.
☒shrubs
☒grass
☐pasture
☐crop or grain
☐Orchards, vineyards or other permanent crops.
☐wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other: Click here to enter text.
☐water plants: water lily, eelgrass, milfoil, other: Click here to enter text.
☒other types of vegetation: See page 6 of VMP

b. What kind and amount of vegetation will be removed or altered? [help]
Click here to enter text.
Deciduous & evergreen trees, new growth.

c. List threatened and endangered species known to be on or near the site. [help]
Click here to enter text.
None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]
Click here to enter text.
See replanting list attached, and on page 16-17 of VMP. Also page 14 of VMP Addendum

e. List all noxious weeds and invasive species known to be on or near the site. [help]
Click here to enter text.
Not known.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: ☒hawk, ☐heron, ☒eagle, ☒songbirds, other: hummingbird, robin, quail
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, other: bobcat, rabbit, coyote

DW

fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, other: Click here to enter text. None

b. List any threatened and endangered species known to be on or near the site. [help]
Click here to enter text. None

c. Is the site part of a migration route? If so, explain. [help]
Click here to enter text. No

d. Proposed measures to preserve or enhance wildlife, if any: [help]
Click here to enter text. Replanting

e. List any invasive animal species known to be on or near the site. [help]
Click here to enter text. None

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]
Click here to enter text. None

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]
Click here to enter text. No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]
Click here to enter text. None

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [help]
Click here to enter text. No

1) Describe any known or possible contamination at the site from present or past uses. [help]
Click here to enter text. None

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]
Click here to enter text. None

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]
Click here to enter text. None

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4) Describe special emergency services that might be required. [help]
Click here to enter text. None

5) Proposed measures to reduce or control environmental health hazards, if any: [help]
Click here to enter text. None

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]
Click here to enter text. Chainsaw noise

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indi-cate what hours noise would come from the site. [help]
Click here to enter text. Short term, max 2 days

3) Proposed measures to reduce or control noise impacts, if any: [help]
Click here to enter text. None - notify adjacent neighbors of work

Noise regulated by BCC 9.18

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]
Click here to enter text. Residential

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]
Click here to enter text. No

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]
Click here to enter text. No.

c. Describe any structures on the site. [help]
Click here to enter text. None

d. Will any structures be demolished? If so, what? [help]
Click here to enter text. No.

e. What is the current zoning classification of the site? [help]
Click here to enter text. Residential . 3.5

f. What is the current comprehensive plan designation of the site? [help]
Click here to enter text. Single Family Medium Density

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g. If applicable, what is the current shoreline master program designation of the site? [help]
Click here to enter text. n/a

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]
Click here to enter text. Yes, steep slope. Wetlands and Streams

i. Approximately how many people would reside or work in the completed project? [help]
Click here to enter text. 0

j. Approximately how many people would the completed project displace? [help]
Click here to enter text. 0

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]
Click here to enter text. 0

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]
Click here to enter text. Review by City of Bellevue

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: [help]
Click here to enter text. None

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]
Click here to enter text. None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]
Click here to enter text. 0

c. Proposed measures to reduce or control housing impacts, if any: [help]
Click here to enter text. 0

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]
Click here to enter text. No structure

b. What views in the immediate vicinity would be altered or obstructed? [help]
Click here to enter text. None

c. Proposed measures to reduce or control aesthetic impacts, if any: [help]
Click here to enter text. None

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11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]
Click here to enter text.
None

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]
Click here to enter text.
No

c. What existing off-site sources of light or glare may affect your proposal? [help]
Click here to enter text.
None

d. Proposed measures to reduce or control light and glare impacts, if any: [help]
Click here to enter text.
None

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]
Click here to enter text.
None

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]
Click here to enter text.
No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]
Click here to enter text.
None

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [help]
Click here to enter text.
No

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]
Click here to enter text.
No

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]
Click here to enter text.
None

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]
Click here to enter text.
None

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14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]
Click here to enter text. None needed. Will park on street and access from HOA property.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]
Click here to enter text. No

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]
Click here to enter text. None

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]
Click here to enter text. No

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]
Click here to enter text. No

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]
Click here to enter text. None

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]
Click here to enter text. No

h. Proposed measures to reduce or control transportation impacts, if any: [help]
Click here to enter text. None

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]
Click here to enter text. No

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
Click here to enter text. None

16. Utilities [help]

a. Circle utilities currently available at the site: [help] None
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,

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other
Click here to enter text.

c. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]
Click here to enter text.
None

C. Signature [help]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Katie Teplicky

Name of signee: Katie Teplicky
Position and Agency/Organization: HOA Vegetation Management Chair, Vuemont
Date Submitted: 8/10/18

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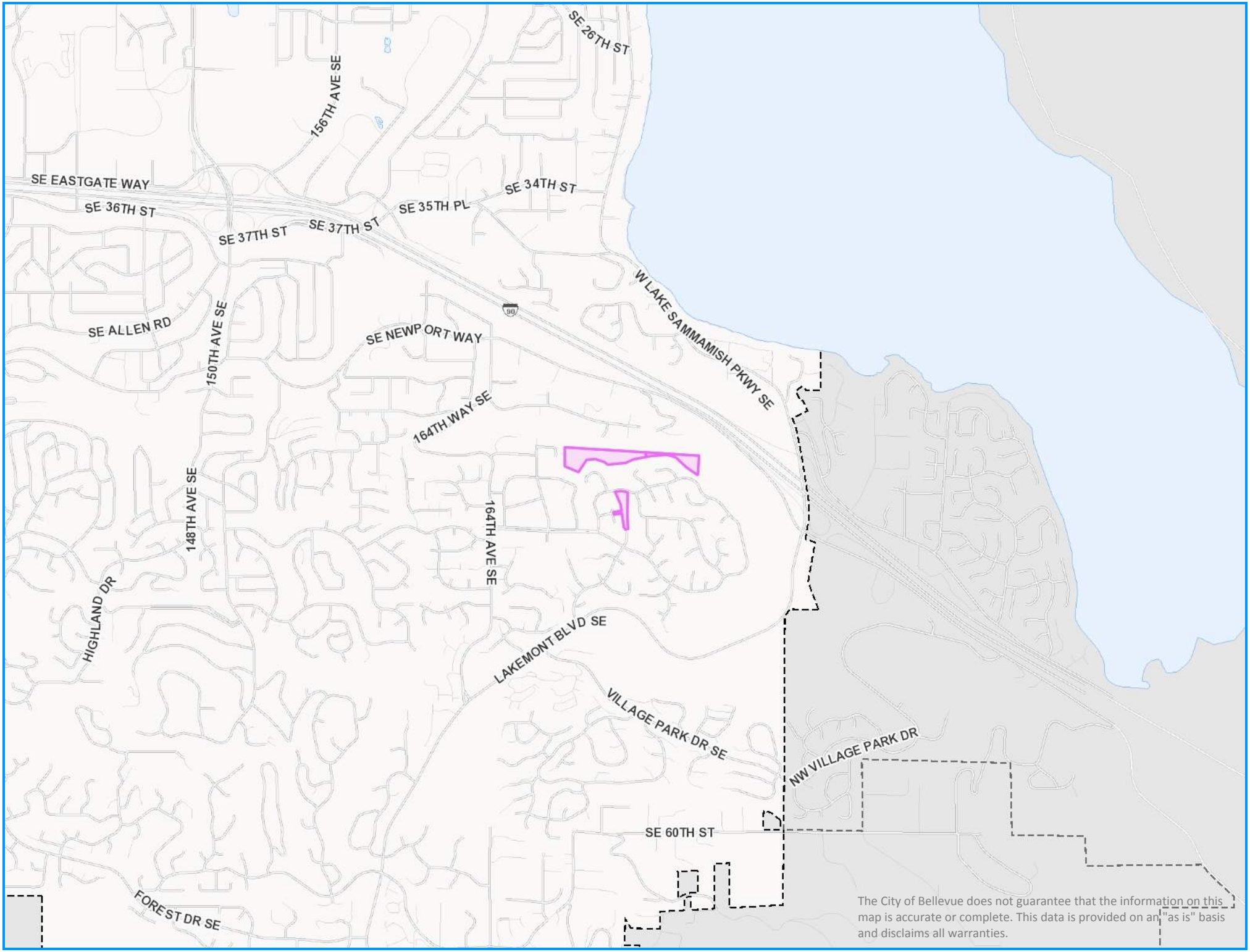
SE 26TH ST
156TH AVE SE
SE EASTGATE WAY
SE 36TH ST
SE 37TH ST
SE 37TH ST
SE 35TH PL
SE 34TH ST
W LAKE SAMMAMISH PKWY SE
SE ALLEN RD
150TH AVE SE
SE NEWPORT WAY
164TH WAY SE
148TH AVE SE
164TH AVE SE
HIGHLAND DR
LAKEMONT BLVD SE
VILLAGE PARK DR SE
NW VILLAGE PARK DR
SE 60TH ST
FOREST DR SE
The City of Bellevue does not guarantee that the information on this map is accurate or complete. This data is provided on an "as is" basis and disclaims all warranties.

AFM
American Forest Management
11415 NE 128th St Suite 110 Kirkland WA 98034 • (425)820-3420 • FAX (425)820-3437
www.americanforestmanagement.com

ADDENDUM REPORT

TO

VEGETATION MANAGEMENT PLAN

Vuemont Vista

Native Growth Protection Area

JUNE 2015

Prepared by:

Bob Layton
Senior Arborist/Forester

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C Significant Tree Summary Tables

D Significant Tree Locator Maps

E Original Vegetation Management Plan, Meridian Environmental Inc. April 2006

I.INTRODUCTION

American Forest Management, Inc. was contacted by Ms. Katie Teplicky of the Vuemont Homeowners Association (HOA) in March of 2015 and was asked to conduct a review of the current Vegetation Management Plan for the Vuemont Vista Native Growth Protection Area.

The original Vegetation Management Plan was written in April of 2006. The purpose of this review is to evaluate past practices and determine if the desired future conditions as outlined in the plan are being met. The ultimate goal is to maintain scenic views while managing the vegetation to provide native growth and the protection of soil resources.

The focus of this review is on Zone 3 where the majority of management has occurred. There has been little activity in Zones 1 and 2. The conditions in Zones 1 and 2 remain relatively unchanged. Conditions remain healthy and stable and consistent with the original plan.

In order to fully evaluate the effectiveness of the plan and past practices, a significant tree inventory was conducted as part of the review. A significant tree is defined as a tree greater than 6" DBH (diameter at breast height, 4 ½' above ground).

As part of the assignment, a new Zone or area (Zone 4) was established. Zone 4 encompasses the vacant HOA parcel (King County Parcel #8965501010) that exists between SE 45th Street and the end of the cul-de-sac of 171st Avenue SE.

II.EXISTING SITE CONDITIONS/OBSERVATIONS

A. Lower Zone 3

Lower Zone 3 includes the lower slopes of Zones 3A, 3B and 3C.

Species composition is comprised of a mix of native coniferous and deciduous species, including Douglas-fir, western red cedar, western hemlock, big leaf maple, red alder, bitter cherry and black cottonwood. Tree ages range from young (less than 10 years) to mature (90 years +).

Many of the evergreen or coniferous trees have been window pruned and/or interlimbed in the recent past. This practice does not appear to have had a negative impact on tree health or longevity. Many of the big leaf maple have been topped. Topping cuts are very old and occurred prior to the induction of the vegetation management plan. Significant trees appear healthy. No indicators of disease or major insect infestations were observed. No high-risk tree conditions were identified.

Understory vegetation is primarily native. Common species include Indian plum, vine maple, stinging nettles, Oregon grape, swordfern, salmonberry, and creeping blackberry. Invasive cover is minor and includes mainly small isolated patches of Himalayan blackberry.

Lower Zone 3C has a dense population of naturally regenerating non-significant trees. These are primarily comprised of bitter cherry and big leaf maple. Lower Zones 3A and 3B have minor numbers of naturally regenerating non-significant trees, primarily big leaf maple.

B. Upper Zone 3

Upper Zone 3 includes the upper slopes of Zones 3A, 3B and 3C.

The upper slopes of Zone 3 contain very sparse tree cover. This area has received the majority of management over the past several years. Past tree removals have been mitigated by the removal of invasive Himalayan blackberry and the planting of native shrubs. Shrubs planted in the zone include primarily snowberry, tall Oregon grape, vine maple and native rose species.

The spread of planted shrubs is inhibited by native and non-native grasses in many areas. The snowberry has been the most successful at establishment and spreading. The prevalence of evergreen shrubs continues to be limited. The tall Oregon grape has become well established, but spreading is limited.

C. Zone 4

Zone 4 is summarized as native deciduous forest. Tree species composition is primarily red alder with a moderate component of big leaf maple and black cottonwood. Scouler willow is present in minor numbers at the south end. Scattered small groupings of western red cedar exist along the west perimeter. A total of 195 significant trees were inventoried in Zone 4.

Much of the subject area has been disturbed in the past by the installation of utilities. This is evident by the dense growth of red alder trees along the eastern perimeter of the parcel. The majority of this alder is in premature decline which is common on disturbed sites.

Understory native vegetation is predominantly comprised of salmonberry, vine maple and Indian plum. Other minor species noted include trillium, Oregon grape, sword fern and bleeding heart.

Invasive species are prevalent in the south end, comprised of Himalayan blackberry and English ivy. The presence of invasive species is only minor in the middle portions and north end.

The subject area is wet. A stream meanders through the middle of the parcel with small associated wetland areas.

III.SIGNIFICANT TREE INVENTORY

As part of this review and update, all areas were re-inventoried for significant trees. Significant trees were identified in the field with a numbered aluminum tag attached to the lower trunk. Tree summary tables can be found in the appendix. Tree tag numbers correspond with the tree summary tables and the tree locator maps (appendix). Tree Locator Maps are provided to aid in locating trees. Not all trees are numbered on the maps but they can be used as guide to locate specific trees.

Inventory Methodology

Each tree in this report was visited. Tree diameters or DBH (diameter at breast height, 4 ½' above ground), were measured by tape. Total tree heights and crown spread were estimated in feet. Each tree was visually examined for defects and vigor. The tree assessment procedure involves the examination of many factors:

- The crown of the tree is examined for current vigor. This is comprised of inspecting the crown (foliage, buds and branches) for color, density, form, and annual shoot growth, limb dieback and disease. The percentage of live crown is estimated for coniferous species only and scored appropriately.

- The bole or main stem of the tree is inspected for decay, which includes cavities, wounds, fruiting bodies of decay (conks or mushrooms), seams, insects, bleeding, callus development, broken or dead tops, structural defects and unnatural leans. Structural defects include crooks, forks with V-shaped crotches, multiple attachments, and excessive sweep.

- The root collar and roots are inspected for the presence of decay, insects and/or damage, as well as if they have been injured, undermined or exposed, or original grade has been altered.

Based on these factors a determination of viability is made. Trees considered 'non-viable' are trees that are in poor condition due to disease, extensive decay and/or cumulative structural defects, which exacerbate failure potential. A 'viable' tree is a tree found to be in good health, in a sound condition with minimal defects and is suitable for its location. Also, it will be wind firm if isolated or left as part of a grouping or grove of trees. A 'borderline' tree is a tree where its viability is in question. These are trees that are beginning to display symptoms of decline due to age, species related problems and/or man caused problems. Borderline trees are not expected to positively contribute to the landscape for a period of +/- 10 years.

Inventory Findings

The previous inventory was lacking in accuracy. Using the provided significant tree inventory and maps, it was very difficult to decipher the location of trees. We used the tables and maps as a guide to identify trees with a numbered aluminum tag. Where possible, the previous numbers were used. In some areas, there were many more significant trees than what was shown on the map. In addition, several trees have grown up to a significant size since the last tree inventory in 2006.

The vast majority of trees are in fair to good condition. No evidence of serious decline or disease issues was observed. Trees have developed typical defects consistent with species profiles. Many of the pioneer species are in natural decline, specifically the bitter cherry and red alder. These pioneer species are in natural decline due to age.

The significant tree inventory is summarized as follows: Total Trees

ZONE	BM	RA	CH	CW	CA	SW	DF	WH	RC	TOTAL
2	14	1					3	2		20
3A	14	3					17		2	36
*3A										65
3B	28	29	2		1		9	23	1	93
3C	20	2	4				9		17	52
4	33	122	2	16		4	2	1	15	195
Total										461

*3A = PORTION OF ZONE 3A NOT INVENTORIED, ORIGINAL DATA USED

BM = big leaf maple RA = red alder CH = bitter cherry
CW = black cottonwood CA = cascara SW = scouler willow
DF = Douglas-fir WH = western hemlock RC = western red cedar

Detailed information for each tree can be found in Appendix C – Tree Summary Tables

IV.DESIRED FUTURE CONDITION EXPECTATIONS

Lower Zone 3

The goals and objectives set out in the original plan are being met for the Lower Zone 3 and Zones 1 and 2. These goals and objectives include protecting stream environments, maintaining slope stability, maintaining a diverse variety of native tree and shrub species, and creating an un-even aged stand structure. Conditions in Zone 1 remain relatively unchanged. This area has not been managed. Conditions in Zone 2 and Lower Zone 3 remain stable and healthy.

Upper Zone 3

Upper Zone 3 is fully vegetated. The desired future condition of having a high percentage or concentration of evergreen shrub species has not been fully met. Upper slopes are primarily in deciduous shrubs and grasses, both native and non-native. There is also a fairly high concentration of thistles. The desired future condition continues to be constrained by the funding available from the homeowners association to conduct invasive species and grasses treatments.

Himalayan blackberry continues to have a moderate presence on the upper slope. The spread is being contained by the tree edge at the mid slope and patches of native vegetation on the lower slope. The invasive butterfly bush is also common.

Recommendations

Continue to use all five tools as outlined in the original plan. These have been effective in protecting resources and meeting objectives. Tool #5 (Native Vegetation Establishment) shall be conducted simultaneously with Tools #1 (Blackberry Eradication) and Tool #2 (Maple Sprout Control). In addition, grasses in the area to be planted shall be treated with an herbicide (Roundup or similar chemical) to encourage the successful establishment and spread of the planted native shrub species.

To continue working toward the desired future condition, a wider variety of native shrubs shall be planted in the future. 75% of plantings shall be evergreen species. On Upper Zone 3, salal and kinnikinnick are highly recommended due to their habitat and growth characteristics and their ability to spread and cover large areas. These will do well in full sun or shade. Swordfern is not establishing well on upper zone 3, future plantings are not recommended.

It appears the majority of plantings have been concentrated on Upper Zone 3. Per the original plan, replacement plantings are required in the Lower Zone when tree removals are carried out. This is critical to establishing a multi-layered dense canopy. A revised plant list is included in the appendix. An even mix of these species is recommended to eventually reach the desired future condition.

Tree Risk Assessments

While conducting the significant tree inventory, several moderate to high-risk tree conditions were identified in new Zone 4. All are concentrated at the south end of the parcel. There are many young to semi-mature black cottonwood trees on the east perimeter that will become problematic as they mature and grow to very large sizes.

No high-risk conditions were observed in Zone 3. Zone 1 was not inventoried but may contain some high-risk conditions due to the proximity of homes to subject trees.

In order to maintain risks at acceptable levels, Zones 1 and 4 shall be periodically evaluated by a Qualified Tree Risk Assessor. Taking a proactive approach will ultimately reduce the costs and risks associated with future tree failures.

The Zone 4 high risk tree issues are currently being evaluated and will be abated in the near future. A follow-up risk assessment is warranted in three to five years or sooner if obvious symptoms of decline present themselves.

A risk assessment of Zone 1 is recommended in the near future. The south and west perimeters shall be evaluated given the proximity of adjacent homes. After the initial assessment, re-evaluations are recommended every three to five years or sooner if obvious symptoms of decline present themselves.

REFERENCES

Vegetation Management Plan, Meridian Environmental Inc. April 2006King County Department of Permitting and Environmental Review Website

King Conservation District – Native Plant Descriptions

Snohomish County Conservation District - Native Plant Descriptions

Zobrist, Kevin W. 2014 Native Trees of Western Washington, A Photographic Guide. Washington State University Press

Appendix A – Site Photos

Upper Zone 3 - area mostly in grasses

Upper Zone 3 – successful rose species establishment

Upper Zone 3A – Successful snowberry establishment

Upper Zone 3A – re-sprouting of big leaf maple

Re-sprouting of cut big leaf maple

View above Zone 3C

Upper Zone 3, Infestation of Himalayan blackberry

Lower Zone 3C

Lower Zone 3B

Zone 4

Zone 4

Zone 4

Appendix B

Plant List – Appropriate Native Shrub Species for Upper Zone 3

Common Name	Species	Vegetative Characteristics
Vine maple	*Acer cininatum*	Tall deciduous shrub/wildlife
Beaked hazelnut/filbert	*Corylus cornuta*	Tall deciduous shrub/wildlife
Low Oregon grape	*Mahonia nervosa*	Low growing evergreen shrub.
Snowberry	*Symphoricarpos albus*	Medium height deciduous shrub.
Red flowering currant	*Ribes sanguineum*	Medium height deciduous shrub.
Indian plum	*Oemleria cerasiformis*	Medium height deciduous shrub.
Kinnikinnick	*Arctostaphylos uva-ursi*	Low growing evergreen shrub.
Salal	*Gaultheria shallon*	Low growing evergreen shrub.
Oceanspray	*Holodiscus discolor*	Medium height deciduous shrub.
Thimbleberry	*Rubus parviflorus*	Medium height deciduous shrub.
Red osier dogwood	*Cornus stolonifera*	Medium-Tall deciduous shrub.
Mock orange	*Philadelphus lewisii*	Medium-Tall deciduous shrub.

Plant List – Appropriate Native Species for Lower Zone 3 and Zone 4

Common Name	Species	Vegetative Characteristics
Vine maple	*Acer cininatum*	Tall deciduous shrub/wildlife
Beaked hazelnut/filbert	*Corylus cornuta*	Tall deciduous shrub/wildlife
Low Oregon grape	*Mahonia nervosa*	Low growing evergreen shrub.
Serviceberry	*Amelanchier alnifolia*	Tall deciduous shrub/wildlife
Snowberry	*Symphoricarpos albus*	Medium height deciduous shrub.
Red flowering currant	*Ribes sanguineum*	Medium height deciduous shrub.
Tall Oregon grape	*Mahonia aquifolium*	Medium height deciduous shrub.
Indian plum	*Oemleria cerasiformis*	Medium height deciduous shrub.
Salal	*Gaultheria shallon*	Low growing evergreen shrub.
Oceanspray	*Holodiscus discolor*	Medium height deciduous shrub.
Thimbleberry	*Rubus parviflorus*	Medium height deciduous shrub.
Shore pine	*Pinus contorta*	Medium height evergreen tree.
Western red cedar	*Thuja plicata*	Shade tolerant evergreen tree.
Western hemlock	*Tsuga heterophylla*	Shade tolerant evergreen tree.
Pacific dogwood	*Cornus nuttallii*	Medium to large deciduous tree.
Shore pine	*Pinus contorta*	Medium height evergreen tree.

VUEMONT VISTA
ZONE 2 - SIGNIFICANT TREE INVENTORY

AMERICAN FOREST MANAGEMENT, INC.
MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
31	BIG LEAF MAPLE	28,19	90	50	FAIR-GOOD	VIABLE	IN STR BUFFER
40	DOUGLAS-FIR	17	72	14	FAIR	VIABLE	TOPPED
41	BIG LEAF MAPLE	22	82	32	FAIR	VIABLE	TOP DECAY
1001	BIG LEAF MAPLE	10,11	74	20	FAIR	VIABLE	TYPICAL
1002	BIG LEAF MAPLE	7	55	10	FAIR	VIABLE	SUPPRESSED, NATURAL LEAN
35	WESTERN HEMLOCK	13	80	14	FAIR	VIABLE	FROST SEAMS
37	BIG LEAF MAPLE	8	64	16	FAIR	VIABLE	TYPICAL
42	BIG LEAF MAPLE	22,18	42	40	FAIR	VIABLE	TOPPED IN PAST
44	BIG LEAF MAPLE	22,20	52	34	FAIR	VIABLE	TOPPED IN PAST
45	RED ALDER	16,14	48	18	FAIR-POOR	BORDERLINE	TRUNK ROT
12	BIG LEAF MAPLE	15	74	36	GOOD	VIABLE	NEXT TO STREAM
10	BIG LEAF MAPLE	29	50	40	FAIR	VIABLE	TOPPED PAST
13	WESTERN HEMLOCK	16	62	18	FAIR	VIABLE	SEAMS
4	BIG LEAF MAPLE	14	60	24	FAIR	VIABLE	SOUND
1024	BIG LEAF MAPLE	16	65	26	FAIR	VIABLE	FORKED AT 8', CODOMINANT STEMS
1060	BIG LEAF MAPLE	11	75	16	FAIR	VIABLE	IN CREEK
48	BIG LEAF MAPLE	20,13	70	30	FAIR	VIABLE	TOPPED IN PAST
1062	DOUGLAS-FIR	14	74	10	FAIR	VIABLE	NEAR CREEK
49	DOUGLAS-FIR	20	90	16	FAIR	VIABLE	WINDOW PRUNED, OLD INTERNAL CRACK
46	BIG LEAF MAPLE	32	70	45	FAIR	VIABLE	MULTIPLE UPRIGHT STEMS

VUEMONT VISTA
ZONE 3A - SIGNIFICANT TREE INVENTORY

AMERICAN FOREST MANAGEMENT, INC.
MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
51	BIG LEAF MAPLE	22	60	22	FAIR	VIABLE	TOPPED IN PAST
1061	BIG LEAF MAPLE	6~9	42	14	FAIR-POOR	BORDERLINE	SUPPRESSED, OVER TOPPED
1063	DOUGLAS-FIR	11	70	14	GOOD	VIABLE	NO CONCERNS
53	DOUGLAS-FIR	18	75	18	GOOD	VIABLE	MINOR TRUNK SWEEP
54	DOUGLAS-FIR	19	67	16	FAIR	VIABLE	WINDOW PRUNED, OLD CROOK
55	DOUGLAS-FIR	17	70	18	GOOD	VIABLE	NO CONCERNS
56	DOUGLAS-FIR	15	70	14	FAIR-GOOD	VIABLE	WINDOW PRUNED
1064	RED ALDER	11	45	10	FAIR-POOR	BORDERLINE	DECLINE
58	DOUGLAS-FIR	16	80	18	FAIR	VIABLE	WINDOW PRUNED
52	BIG LEAF MAPLE	28	52	28	FAIR	VIABLE	TOPPED IN PAST
67	BIG LEAF MAPLE	24,11	54	24	FAIR	VIABLE	TOPPED IN PAST
61	DOUGLAS-FIR	14	72	12	FAIR	VIABLE	CROWN RAISED
1065	DOUGLAS-FIR	8	47	8	FAIR	VIABLE	BROKEN TOP
1066	DOUGLAS-FIR	15	78	14	GOOD	VIABLE	WINDOW PRUNED
1067	DOUGLAS-FIR	8	52	8	FAIR	VIABLE	SUPPRESSED
1068	DOUGLAS-FIR	9	57	10	FAIR	VIABLE	SUPPRESSED
59	BIG LEAF MAPLE	30,19	64	32	FAIR	VIABLE	TOPPED IN PAST
1069	DOUGLAS-FIR	7	28	12	FAIR-POOR	BORDERLINE	OVER TOPPED, SUPPRESSED
63	BIG LEAF MAPLE	18	52	30	FAIR	VIABLE	TOPPED IN PAST
68	DOUGLAS-FIR	17	70	16	FAIR	VIABLE	WINDOW PRUNED
1070	DOUGLAS-FIR	16	64	16	GOOD	VIABLE	NO CONCERNS
1071	DOUGLAS-FIR	13	70	16	GOOD	VIABLE	NO CONCERNS
1072	BIG LEAF MAPLE	12,10	46	14	FAIR	VIABLE	LEANS, SUPPRESSED
1073	BIG LEAF MAPLE	30	50	30	FAIR	VIABLE	TOPPED IN PAST
1074	DOUGLAS-FIR	7	34	6	FAIR-POOR	BORDERLINE	OLD BROKEN TOP, SMALL LIVE CROWN, HIT BY FELLED TREE
1075	DOUGLAS-FIR	9	32	6	FAIR-POOR	BORDERLINE	OLD BROKEN TOP
1076	RED ALDER	8	46	8	FAIR	VIABLE	TYPICAL
1077	RED ALDER	11	50	8	FAIR	VIABLE	TYPICAL
1078	WESTERN RED CEDAR	4~9	32	16	GOOD	VIABLE	CLUMP OF 5 STEMS
89	BIG LEAF MAPLE	15	72	26	FAIR-GOOD	VIABLE	FORKED TOP
88	WESTERN RED CEDAR	16,13	50	22	GOOD	VIABLE	NO CONCERNS
90	BIG LEAF MAPLE	11	56	24	FAIR	VIABLE	TOPPED IN PAST
1079	BIG LEAF MAPLE	6	40	12	FAIR	VIABLE	SAPLING, POOR TAPER
1080	BIG LEAF MAPLE	6~8	50	20	FAIR	VIABLE	CLUMP OF 3 SAPLINGS
1081	BIG LEAF MAPLE	6~10	56	16	FAIR	VIABLE	CLUMP OF 3, RE GROWTH
1082	BIG LEAF MAPLE	7	40	12	FAIR	VIABLE	SAPLING, POOR TAPER

VUEMONT VISTA
ZONE 3B - SIGNIFICANT TREE INVENTORY

AMERICAN FOREST MANAGEMENT, INC.
MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
34	BIG LEAF MAPLE	30,11	94	46	FAIR	VIABLE	SOUND
38	WESTERN HEMLOCK	12	74	14	FAIR	VIABLE	SEAMS
1003	WESTERN HEMLOCK	11	68	12	FAIR	VIABLE	MODERATE TRUNK DECAY
32	DOUGLAS-FIR	17	92	18	GOOD	VIABLE	NO CONCERNS
33	DOUGLAS-FIR	18	82	16	FAIR	VIABLE	BROKEN TOP
1004	RED ALDER	8	42	10	FAIR	VIABLE	SUPPRESSED
36	BITTER CHERRY	16	70	NA	DEAD	DEAD	
39	WESTERN HEMLOCK	20	80	20	FAIR	VIABLE	SEAMS
1005	BITTER CHERRY	12	62	NA	DEAD	DEAD	
1006	RED ALDER	10,6	60	18	FAIR	VIABLE	TYPICAL
30	BIG LEAF MAPLE	4~8	52	34	FAIR	VIABLE	CLUSTER, 8 STEMS
1007	WESTERN HEMLOCK	10	60	16	FAIR	VIABLE	SUPPRESSED
1008	BIG LEAF MAPLE	5~6	46	14	FAIR-POOR	B	GROWING OFF ROTTING STUMP
15	RED ALDER	11	67	16	FAIR	VIABLE	TYPICAL
1009	RED ALDER	10	60	12	FAIR	VIABLE	FORKED TOP
1010	RED ALDER	10	62	14	FAIR	VIABLE	TYPICAL
21	DOUGLAS-FIR	24	84	26	FAIR	VIABLE	WINDOW PRUNED
1011	WESTERN HEMLOCK	9	54	12	FAIR	VIABLE	SUPPRESSED
22	BIG LEAF MAPLE	9,10	60	36	FAIR-POOR	B	GROWING OFF ROTTEN STUMP
20	WESTERN HEMLOCK	13	54	14	FAIR	VIABLE	FROST SEAMS
14	RED ALDER	7	50	8	FAIR-POOR	B	DECLINE
1012	RED ALDER	9	56	14	FAIR	VIABLE	TYPICAL
1013	RED ALDER	9	66	12	FAIR	VIABLE	TRUNK DECAY
1014	WESTERN HEMLOCK	10,8	40	20	FAIR	VIABLE	SUPPRESSED
1015	RED ALDER	8	52	12	FAIR	VIABLE	TYPICAL
1016	RED ALDER	10	60	14	FAIR	VIABLE	TYPICAL
1017	RED ALDER	11	60	12	FAIR	B	SOME DIEBACK
7	WESTERN HEMLOCK	24	76	24	FAIR	VIABLE	SPIRAL FROST CRACKS
1018	BIG LEAF MAPLE	7	48	14	FAIR	VIABLE	YOUNG, FORKED TOP
6	WESTERN HEMLOCK	22	70	22	FAIR	VIABLE	SEAMS
1019	WESTERN HEMLOCK	15	74	18	FAIR	VIABLE	CROOK
8	WESTERN HEMLOCK	12	58	16	FAIR	VIABLE	SUPPRESSED

ZONE 3B - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
1020	BIG LEAF MAPLE	8~20	66	44	FAIR	VIABLE	LARGE CLUSTER, 5 STEMS
1021	WESTERN HEMLOCK	12	60	12	FAIR	VIABLE	SUPPRESSED
5	BIG LEAF MAPLE	8~20	52	40	FAIR	VIABLE	LARGE CLUSTER, 6 STEMS, TOPPED IN PAST
1022	CASCARA	16	60	20	FAIR	BORDERLINE	MATURE
1023	WESTERN HEMLOCK	14,8	60	14	FAIR	VIABLE	SUPPRESSED, ASSYMETRIC CROWN
17	BIG LEAF MAPLE	5~10	55	40	FAIR	VIABLE	LARGE CLUSTER OF 8 STEMS
1025	BIG LEAF MAPLE	8,12,13	60	36	FAIR	VIABLE	TYPICAL
1026	RED ALDER	13,11	56	22	FAIR	VIABLE	TOPPED IN PAST
1027	BIG LEAF MAPLE	11	56	18	FAIR	VIABLE	TYPICAL
1028	BIG LEAF MAPLE	10	48	18	FAIR	VIABLE	DECAY COLUMN
1029	RED ALDER	10	52	12	FAIR	VIABLE	TYPICAL
1030	RED ALDER	10,8	44	10	FAIR	BORDERLINE	DECLINE
1031	RED ALDER	9,8,7	44	12	FAIR	VIABLE	TYPICAL
1032	RED ALDER	7	40	10	FAIR	VIABLE	TYPICAL
1033	RED ALDER	9	46	10	FAIR-POOR	BORDERLINE	DECLINE
1034	RED ALDER	13	54	16	FAIR	VIABLE	FORKED TOP
29	RED ALDER	12	56	14	FAIR	VIABLE	TYPICAL
1035	RED ALDER	9	50	14	FAIR	VIABLE	CROOK
1036	RED ALDER	9,9	56	14	FAIR	BORDERLINE	DECLINE, LOW VIGOR
1037	RED ALDER	10	52	12	FAIR	VIABLE	TYPICAL
27	BIG LEAF MAPLE	30	78	40	FAIR	VIABLE	TYPICAL
28	DOUGLAS-FIR	17	73	16	FAIR	VIABLE	TYPICAL
1038	DOUGLAS-FIR	18	75	16	GOOD	VIABLE	NO CONCERNS
1039	WESTERN RED CEDAR	11	42	16	GOOD	VIABLE	OVERTOPPED
24	BIG LEAF MAPLE	26,23	80	50	FAIR	VIABLE	MATURE
1040	DOUGLAS-FIR	8	42	10	FAIR	BORDERLINE	SUPPRESSED, SMALL LIVE CROWN
25	BIG LEAF MAPLE	28	82	42	FAIR	VIABLE	TYPICAL
26	RED ALDER	10,9	44	10	FAIR-POOR	BORDERLINE	DECLINE
1041	RED ALDER	9	45	10	FAIR	VIABLE	FORKED TOP, TOPPED IN PAST
1042	BIG LEAF MAPLE	5~6	45	16	FAIR-POOR	BORDERLINE	STUMP SPROUTS, 6 STEMS
1043	BIG LEAF MAPLE	14	44	18	FAIR	VIABLE	TOPPED IN PAST
300	BIG LEAF MAPLE	18	56	30	FAIR	VIABLE	DECENT FORM
1044	WESTERN HEMLOCK	8	32	14	FAIR	VIABLE	TYPICAL
301	WESTERN HEMLOCK	8	28	12	FAIR	VIABLE	TYPICAL

ZONE 3B - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
302	RED ALDER	11	54	12	FAIR	VIABLE	FORKED TOP
304	RED ALDER	9,8	40	10	FAIR-POOR	BORDERLINE	DECLINE, EPICORMICS
318	BIG LEAF MAPLE	12~14	56	40	FAIR	VIABLE	CLUMP OF 4 STEMS, TOPPED IN PAST
316	WESTERN HEMLOCK	15	64	16	FAIR	VIABLE	TYPICAL
1045	BIG LEAF MAPLE	18~30	84	40	FAIR	VIABLE	LARGE CLUSTER OF 4 STEMS, TOPPED IN PAST
314	BIG LEAF MAPLE	18,11	74	22	FAIR	VIABLE	TYPICAL
305	RED ALDER	9	50	10	FAIR	BORDERLINE	SOME DIEBACK
1048	RED ALDER	8	42	8	POOR	NON	DEAD TOP
1049	DOUGLAS-FIR	13,10	58	18	FAIR	VIABLE	MAIN TRUNK FORKS AT 2', WEAK ATTACHMENT
1050	BIG LEAF MAPLE	13	62	18	FAIR	VIABLE	FORKED TOP
1051	DOUGLAS-FIR	9	45	10	FAIR	VIABLE	SUPPRESSED
1046	DOUGLAS-FIR	16	70	14	FAIR	VIABLE	MAJOR TRUNK SWEEP
1047	BIG LEAF MAPLE	14,8	52	22	FAIR	VIABLE	TOPPED IN PAST
33	WESTERN HEMLOCK	17	62	24	FAIR	VIABLE	NO CONCERNS
1052	WESTERN HEMLOCK	17	70	20	FAIR	VIABLE	SEAMS
324	WESTERN HEMLOCK	14	18	20	FAIR-POOR	BORDERLINE	TOPPED
329	WESTERN HEMLOCK	17	14	16	FAIR-POOR	BORDERLINE	TOPPED
317	WESTERN HEMLOCK	15,15	20	20	FAIR-POOR	BORDERLINE	TOPPED
1053	WESTERN HEMLOCK	19	12	12	FAIR-POOR	BORDERLINE	TOPPED
1054	BIG LEAF MAPLE	8	40	14	FAIR	VIABLE	CROOKED TOP
1055	WESTERN HEMLOCK	14,9	44	22	FAIR	VIABLE	OKAY
333	BIG LEAF MAPLE	15	46	22	FAIR	VIABLE	TOPPED IN PAST
332	BIG LEAF MAPLE	10~16	65	30	GOOD	VIABLE	CLUMP OF 5 STEMS
1056	BIG LEAF MAPLE	16,8	60	26	FAIR	VIABLE	TOPPED IN PAST
1057	BIG LEAF MAPLE	7~8	54	16	FAIR	VIABLE	CLUMP OF 3 STEMS, TYPICAL
1058	RED ALDER	11	50	14	FAIR	VIABLE	TYPICAL
1059	BIG LEAF MAPLE	9	42	20	FAIR	VIABLE	PART OF REGROWTH CLUSTER

VUEMONT VISTA
ZONE 3C - SIGNIFICANT TREE INVENTORY

AMERICAN FOREST MANAGEMENT, INC.
MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
E1	BIG LEAF MAPLE	11	16	8	POOR	BORDERLINE	TOPPED
E2	WESTERN RED CEDAR	11	16	12	POOR	BORDERLINE	TOPPED
E3	WESTERN RED CEDAR	15	18	12	POOR	BORDERLINE	TOPPED
E4	BIG LEAF MAPLE	8,7,5,4	32	18	FAIR	VIABLE	CLUMP OF 4 STEMS
E5	WESTERN RED CEDAR	8	24	6	POOR	BORDERLINE	PARTIALLY TOPPED
E20	WESTERN RED CEDAR	12	32	12	FAIR	VIABLE	FORKED TOP
E21	WESTERN RED CEDAR	10	42	16	GOOD	VIABLE	NO CONCERNS
E22	WESTERN RED CEDAR	11	45	12	FAIR	VIABLE	FORKED TOP
E23	WESTERN RED CEDAR	4~8	36	16	FAIR	VIABLE	CLUMP OF 5 STEMS
E24	WESTERN RED CEDAR	10,8,5	36	12	FAIR	VIABLE	FORKED, CLUMP-3 STEMS
E25	WESTERN RED CEDAR	6~7	34	10	FAIR	VIABLE	CLUMP OF 4 STEMS
E26	WESTERN RED CEDAR	9	32	8	FAIR-POOR	BORDERLINE	FORKED, WEAK STRUCTURE
E27	WESTERN RED CEDAR	13,5	32	16	FAIR	VIABLE	FORKED TOP
E28	WESTERN RED CEDAR	16	40	20	GOOD	VIABLE	OPEN GROWN, PREVIOUSLY TOPPED
E29	BIG LEAF MAPLE	6	36	14	FAIR	VIABLE	TYPICAL
E30	DOUGLAS-FIR	12	46	14	GOOD	VIABLE	YOUNG
E31	BITTER CHERRY	9	44	16	FAIR	VIABLE	TYPICAL
E32	WESTERN RED CEDAR	7	32	8	FAIR	VIABLE	TYPICAL
E33	BIG LEAF MAPLE	6	38	8	FAIR	VIABLE	POOR TAPER-STRUCTURE
E34	BITTER CHERRY	6,5	44	12	FAIR	VIABLE	TYPICAL
E35	WESTERN RED CEDAR	10	28	18	GOOD	VIABLE	OPEN GROWN
E14	DOUGLAS-FIR	37	130	26	GOOD	VIABLE	NO CONCERNS
E13	BIG LEAF MAPLE	25	90	28	GOOD	VIABLE	NO CONCERNS
E15	BIG LEAF MAPLE	22	90	22	FAIR	VIABLE	TYPICAL
E36	DOUGLAS-FIR	10	48	24	GOOD	VIABLE	YOUNG
E37	DOUGLAS-FIR	11	38	18	FAIR	VIABLE	SUPPRESSED
E16	BIG LEAF MAPLE	16~20	90	36	FAIR	VIABLE	LARGE CLUMP - 5 STEMS
E38	DOUGLAS-FIR	16	70	24	GOOD	VIABLE	NO CONCERNS
E39	DOUGLAS-FIR	10	50	14	GOOD	VIABLE	YOUNG
E40	DOUGLAS-FIR	13	55	16	GOOD	VIABLE	YOUNG
E41	DOUGLAS-FIR	8	45	14	FAIR-GOOD	VIABLE	OLD BROKEN TOP
E42	DOUGLAS-FIR	7	44	12	GOOD	VIABLE	YOUNG

ZONE 3C - SIGNIFICANT TREE INVENTORY

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
E43	WESTERN RED CEDAR	15,13,9	50	18	GOOD	VIABLE	CLUSTER
E44	RED ALDER	7	50	12	FAIR	VIABLE	POOR TAPER
E11	BIG LEAF MAPLE	17	46	16	FAIR	VIABLE	FORKED TOP, PAST TRIMMING
E45	BIG LEAF MAPLE	9	40	18	FAIR-POOR	BORDERLINE	DIEBACK
E46	BIG LEAF MAPLE	10	56	14	FAIR	VIABLE	TYPICAL
E47	BIG LEAF MAPLE	8	52	10	FAIR	VIABLE	POOR TAPER
E48	BIG LEAF MAPLE	7	45	6	FAIR	VIABLE	FORKED TOP
E49	WESTERN RED CEDAR	5~9	40	18	GOOD	VIABLE	YOUNG CLUSTER-4 STEMS
E50	BIG LEAF MAPLE	7~9	44	16	FAIR	VIABLE	YOUNG CLUSTER-3 STEMS
E51	BIG LEAF MAPLE	6~7	46	16	FAIR	VIABLE	YOUNG CLUSTER-4 STEMS
E52	BIG LEAF MAPLE	7	40	10	FAIR	VIABLE	PART OF YOUNG CLUSTER
E53	BIG LEAF MAPLE	12,9	48	20	FAIR	VIABLE	TYPICAL, NEXT TO E33
E54	BIG LEAF MAPLE	5~9	50	20	FAIR	VIABLE	YOUNG CLUSTER-4 STEMS
E55	RED ALDER	6	40	20	FAIR-POOR	BORDERLINE	PART OF CLUSTER OFF PREV TOPPED TREE
E56	BIG LEAF MAPLE	8	36	18	FAIR	VIABLE	YOUNG, SAPLING
E57	BIG LEAF MAPLE	14	40	22	FAIR	VIABLE	TYPICAL, YOUNG
E58	WESTERN RED CEDAR	8,7,5	32	20	GOOD	VIABLE	YOUNG CLUSTER-3 STEMS
E59	BITTER CHERRY	5~8	44	12	FAIR	VIABLE	YOUNG CLUSTER-6 STEMS
E60	BITTER CHERRY	5~7	40	10	FAIR	VIABLE	YOUNG CLUSTER-3 STEMS
E61	BITTER CHERRY	9	46	12	FAIR	VIABLE	TYPICAL

VUEMONT VISTA
ZONE 4 - SIGNIFICANT TREE INVENTORY

AMERICAN FOREST MANAGEMENT, INC.
MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
401	big leaf maple	7~8	45	16	fair	viable	poor form, stump sprouts-5 stems
402	black cottonwood	11	60	12	fair	viable	natural lean, young
403	big leaf maple	10	50	10	fair	viable	forked top
404	big leaf maple	7	45	6	fair-poor	borderline	natural lean, crook
405	big leaf maple	11,12	55	12	poor	non	fork, codominant stems, high risk
406	western red cedar	8	24	16	good	viable	suppressed by maple
407	big leaf maple	33	75	35	good	viable	minor trunk decay
408	big leaf maple	7~9	50	12	fair-poor	borderline	suppressed, 3 stems, natural leans, crooks, poor form
409	big leaf maple	18	65	28	fair	viable	forked top, moderate risk
410	Douglas-fir	40	95	30	fair-good	viable	no significant concerns
411	big leaf maple	7	20	10	poor	non	bent top, suppressed, no target
412	big leaf maple	8	35	10	fair-poor	viable	suppressed, crooked top
413	red alder	6	35	10	fair-poor	borderline	suppressed, trunk decay
414	red alder	8	40	12	fair	viable	typical
415	red alder	18	45	16	poor	non	mature, dead/broken top, low risk
416	big leaf maple	28	90	38	fair-good	viable	no concerns
417	big leaf maple	6~9	45	12	fair-poor	viable	poor form, stump sprouts, 3 stems
418	big leaf maple	11	40	8	fair	viable	poor form
419	western red cedar	18	50	16	good	viable	next to stream
420	big leaf maple	34	80	35	good	viable	sound
421	red alder	9	50	8	fair	viable	natural lean, future problem
422	red alder	9	45	8	fair	viable	moderate trunk rot
423	red alder	10	45	6	fair-poor	borderline	natural lean, top decline
424	big leaf maple	8	40	6	fair	viable	suppressed, forked top
425	red alder	7	20	4	poor	non	90% dead, could hit fence, lean
426	red alder	9	30	6	poor	non	dead/broken top, low risk
427	big leaf maple	6,9	40	12	fair	viable	typical, forked top, problematic in future
428	big leaf maple	7	30	8	fair-poor	borderline	previous top failure, decay at fork, low risk
429	red alder	12	30	0	dead	dead	moderate risk
430	big leaf maple	7~10	50	20	fair	viable	cluster of 7 stems, typical
431	big leaf maple	34	95	35	fair	viable	good form
432	western red cedar	22,20	60	30	good	viable	no concerns, next to stream

ZONE 4 - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
433	big leaf maple	30	90	30	fair	viable	forked top, low risk
434	big leaf maple	19	65	20	fair	viable	typical
435	big leaf maple	12	40	15	fair-poor	viable	forked top, low risk
436	big leaf maple	32	105	40	fair-good	viable	no concerns
437	big leaf maple	30,28	95	45	fair	viable	decent form, low to moderate risk
438	big leaf maple	34	90	40	fair-good	viable	no concerns
439	bitter cherry	9	70	12	fair	borderline	epicormics, incipient decline
440	red alder	12	55	12	fair	viable	typical, low risk
441	red alder	10,10,9	55	12	fair-poor	borderline	decline, low risk
442	red alder	10	45	10	fair-poor	borderline	forked top, high pot for failure, low target rating
443	red alder	11	45	12	fair	viable	typical
444	red alder	12	40	14	fair	viable	broken top
445	big leaf maple	7	34	12	fair	viable	previous branch failure
446	big leaf maple	8,8	45	16	fair	viable	crooked tops
447	black cottonwood	28,19,20	110	40	fair	viable	next to creek
448	bitter cherry	10	48	10	fair	viable	decent vigor
449	red alder	8,10	35	16	fair-poor	borderline	broken tops, decline
450	red alder	9	46	14	fair-poor	borderline	top decline
451	red alder	9	52	10	poor	non	decline
452	big leaf maple	13	48	22	fair	viable	forked top
453	red alder	13	53	15	fair-poor	borderline	broken top, decline
454	big leaf maple	6	36	12	fair	viable	sapling
455	big leaf maple	8	30	10	fair	viable	suppressed
456	red alder	7	34	8	poor	non	90% dead
457	red alder	7	36	8	fair-poor	borderline	suppressed, decline
458	black cottonwood	24	85	40	fair	viable	forked top, appears sound
459	red alder	10	40	10	poor	non	top decline
460	red alder	9	40	10	poor	non	decline, heavy lean to road
461	red alder	10,8	46	10	fair-poor	borderline	top decline, ivy
462	red alder	8	50	8	fair	viable	poor form, suppressed
463	red alder	20	70	18	fair-poor	borderline	over-mature, decline, rot, low target rating
464	big leaf maple	21	75	28	fair-good	viable	good form
465	red alder	7	50	10	fair-poor	borderline	top decline
466	red alder	7,9	50	14	fair-poor	borderline	top decline

ZONE 4 - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
467	red alder	10,7	55	12	fair	borderline	incipient decline, leans
468	red alder	11	50	14	fair	borderline	lean
469	red alder	10	55	14	fair	borderline	top decline
470	red alder	9	50	14	fair	viable	lean
471	red alder	7,8	50	14	fair	viable	leans
472	red alder	8	55	12	fair	viable	lean
473	red alder	7,7	45	12	fair-poor	borderline	top decline
474	red alder	8	50	12	fair	viable	incipient decline
475	red alder	9	55	12	poor	non	top decline, rot, lean
476	red alder	10	30	8	fair-poor	borderline	broken
477	red alder	6	45	6	poor	non	dead top, decline
478	red alder	8	40	10	fair-poor	borderline	top decline
479	red alder	8	25	6	fair-poor	borderline	broken
480	red alder	7	40	10	poor	non	top decline
481	red alder	8	50	10	fair-poor	borderline	top decline
482	big leaf maple	8	45	14	fair	viable	forked top, typical
483	red alder	7	50	10	fair-poor	borderline	top decline
484	red alder	8,7	40	12	poor	non	dead tops
485	red alder	7	32	8	fair-poor	borderline	broken top, decline
486	red alder	12	50	16	fair-poor	borderline	lean, rot, epicormics
487	red alder	7	35	10	fair-poor	borderline	top decline
488	red alder	7	45	10	fair	viable	lean, crook
489	red alder	9	45	12	fair-poor	borderline	heavy lean, top decline
490	red alder	8	45	10	fair	viable	ok
491	red alder	8	50	12	fair	viable	ok
492	red alder	9	50	12	fair	viable	ok
493	red alder	7	45	8	fair-poor	borderline	top decline
494	red alder	9	50	14	fair	viable	ok
495	big leaf maple	8	45	12	fair	viable	typical
496	red alder	6	45	8	fair	borderline	incipient decline
497	red alder	9	50	10	fair	viable	ok
498	red alder	10	55	12	fair	viable	lean, crook
499	red alder	9,8	45	10	fair-poor	borderline	top decline
500	red alder	8	40	8	fair-poor	borderline	suppressed, low vigor

ZONE 4 - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
501	red alder	8,7	40	6	poor	non	dying, too wet
502	black cottonwood	20,19	90	30	fair	viable	typical, semi-mature
503	red alder	8	40	8	fair-poor	borderline	top decline
504	red alder	10	50	10	fair-poor	borderline	top decline
505	red alder	7	55	10	fair-poor	borderline	thin top
506	red alder	6	50	6	fair-poor	borderline	thin top
507	red alder	7	50	10	fair	viable	forked top
508	red alder	7	50	8	fair-poor	borderline	top decline
509	red alder	8	60	8	fair-poor	borderline	thin top
510	red alder	7	55	8	fair-poor	borderline	thin top
511	red alder	10	60	10	fair-poor	borderline	top decline, heavy lean
512	red alder	8	45	12	fair-poor	borderline	heavy lean
513	red alder	11	65	14	fair-poor	borderline	top decline
514	red alder	11	60	12	fair	viable	ok
515	red alder	10	60	12	fair-poor	borderline	top decline
516	red alder	10	45	10	poor	non	broken/dead top
517	red alder	8	55	8	poor	non	major decline
518	red alder	7	50	8	fair-poor	borderline	thin top
519	red alder	10	60	10	fair-poor	borderline	top decline
520	red alder	8	55	10	fair	viable	ok
521	red alder	7	50	6	fair-poor	borderline	low vigor
522	red alder	11	55	16	fair-poor	borderline	top decline
523	red alder	9	40	10	fair-poor	borderline	broken top, low vigor
524	black cottonwood	38	95	40	poor	non	over-mature, declining
525	red alder	6	35	6	poor	non	major decline
526	red alder	12	40	12	poor	non	major decline
527	red alder	11	50	14	fair	viable	ok
528	red alder	8	50	10	fair	viable	low vigor
529	red alder	9	55	12	fair	viable	low vigor
530	red alder	6	45	8	fair-poor	borderline	top decline
531	red alder	7	50	6	fair-poor	borderline	thin top
532	red alder	10	60	14	fair	viable	ok
533	red alder	7,6	55	10	fair	viable	thin tops
534	red alder	8	60	10	fair	viable	low vigor

ZONE 4 - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
535	red alder	7	50	10	fair	viable	ok
536	red alder	7	50	10	fair	viable	ok
537	black cottonwood	9,15,6	80	25	fair	viable	typical, remove leaning 6" stem
538	black cottonwood	10	65	16	fair	viable	slight lean to home, moderate risk
539	red alder	13,7	50	12	fair	viable	cavity
540	big leaf maple	7	35	14	fair	viable	old broken top, poor form
541	black cottonwood	16	70	20	fair	viable	typical, young
542	black cottonwood	6	40	10	fair-poor	borderline	suppressed, moderate risk
543	black cottonwood	9	65	14	fair	viable	poor taper, moderate risk
544	scouler willow	14	60	10	poor	non	lean to house, high risk
545	scouler willow	8	40	8	poor	borderline	trunk rot, forked top
546	black cottonwood	11	60	14	fair	viable	typical, slight lean to house
547	red alder	7	40	8	fair	borderline	suppressed, lean
548	black cottonwood	15	75	16	fair	viable	typical, slight lean to private property
549	black cottonwood	12	75	16	fair	viable	young, poor taper
550	scouler willow	8	30	12	fair	viable	low risk
551	western hemlock	6	30	12	good	viable	ok
552	scouler willow	10,10	35	16	fair	viable	remove ivy
553	black cottonwood	50	90	40	poor	non	over-mature, senescent, lateral decline, high risk
554	big leaf maple	23	50	16	fair-poor	borderline	significant decy, previous stem failure, moderate risk
555	red alder	9	55	10	fair-poor	borderline	top decline
556	red alder	11,11	50	16	fair-poor	borderline	top decline, leans, mh risk
557	red alder	16,10,6	65	14	poor	non	high risk, ext decay, remove
558	red alder	9	60	6	fair-poor	borderline	top decline
559	red alder	11	60	12	fair	borderline	lean, forked top, low risk
560	red alder	18	70	16	fair-poor	borderline	lean to house, problematic, high risk
561	red alder	9	50	12	fair-poor	borderline	top decline, low vigor
562	red alder	10,7	55	14	fair	viable	leans
563	red alder	11,10	60	16	fair	viable	ok, remove ivy
564	red alder	10,6	50	12	fair-poor	borderline	top decline, low risk
565	red alder	10	60	12	fair	viable	incipient decline
566	western red cedar	28	70	18	good	viable	no concerns
567	big leaf maple	18	55	12	fair	viable	moderate risk, suppressed
568	red alder	10	75	16	fair	viable	ok, in middle of wetland

ZONE 4 - SIGNIFICANT TREE INVENTORY MAY 2015

Tree/Tag #	Species	DBH	Height	Crown Spread	Condition	Viability	Comments
569	western red cedar	26	70	18	good	viable	natural lean
570	western red cedar	22	65	16	good	viable	ok
571	western red cedar	28	80	20	fair-good	viable	decay column, typical
572	black cottonwood	44	50	22	poor	non	over-mature, senescent, large previous failure
573	western red cedar	34	90	20	good	viable	ok
574	western red cedar	24	80	16	good	viable	ok
575	black cottonwood	44	120	35	poor	non	over-mature, large burl, high risk
576	western red cedar	21	75	18	fair-good	viable	ok
577	western red cedar	18	65	18	fair-good	viable	remove ivy
578	western red cedar	32	85	20	good	viable	ok
579	red alder	18	50	12	poor	non	over-mature, broken
580	western hemlock	21	90	24	fair-good	viable	ok
581	red alder	12	70	16	fair	viable	ok
582	red alder	8	60	6	poor	non	major decline, low risk
583	western red cedar	20	70	18	good	viable	in wetland
584	western red cedar	8	30	20	good	viable	young, suppressed
585	red alder	12	50	16	fair-poor	borderline	top decline, lean, mh risk
586	big leaf maple	9	45	20	fair	viable	typical
587	red alder	13	70	16	fair	viable	ok
588	red alder	11	65	12	fair	viable	crook, low vigor
589	red alder	9,9	60	10	fair	viable	ok
590	Douglas-fir	28	65	18	fair	viable	broken top, low risk
591	black cottonwood	60	125	40	poor	non	senescent, in decline, high risk
592	western red cedar	34	85	25	fair-good	viable	ok
593	red alder	13,10	65	15	fair-poor	borderline	decline, low risk
594	red alder	8	45	12	fair-poor	borderline	top decline
595	black cottonwood	28,26	100	40	poor	non	major structural defect, co-dominant stems

Vuemont
Sec 13 - T 24 N, R 5 E, King County

ORTHOPHOTO

1 inch = 200 feet

0 200 Feet

Map date: 4/7/2015

AFM
American Forest Management

N

TREE LOCATOR MAP

Parcel bdy

Vuemont
Sec 13 - T 24 N, R 5 E, King County

ORTHOPHOTO

1 inch = 100 feet

0 200 Feet

Map date: 4/7/2015

AFM
American Forest Management

ZONE 3 C TREE LOCATOR MAP

Parcel bdy

Vuemont
Sec 13 - T 24 N, R 5 E, King County

ORTHOPHOTO

1 inch = 100 feet

0 100 200 Feet

Map date: 4/7/2015

AFM
American Forest Management

ZONE 4

Parcel bdy

TREE LOCATOR MAP

Vegetation Management Plan

Vuemont Vista
Native Growth Protection Area

Prepared by

Jeff Boyce, CF
Forest Ecologist

Meridian Environmental, Inc.

and

Ken Moyle
President

Vuemont
Homeowners Association

April 2006

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By signing and dating this document, both parties agree to the terms and conditions outlined therein.

Signatures:

X_____

Morgan Nichols, Associate Planner, for the City of Bellevue Department of Planning and Community Development

X_____

Ken Moyle, Representative for the Vuemont Vista Homeowners Association

1 INTRODUCTION AND SITE DESCRIPTION

The purpose of this plan is to describe a long-term strategy for management of vegetation and scenic resources on 10 acres of privately owned land in the Vuemont Vista subdivision. The existing environmental resources on the site are described. Goals, objectives, and desired future conditions of the overall site within the subject parcels are defined, along with treatment recommendations to achieve the desired future conditions.

The Vuemont Vista ("Vuemont") development is located in southeast Bellevue, immediately south of Interstate 90 and east of Lakemont Blvd, on a hill overlooking Lake Sammamish (Figure 1-1).

Figure 1-1. Vuemont Vista Vicinity

The subject property consists of two contiguous tax parcels that form the northern boundary of the Vuemont development (Figure 1-2). Vuemont Vista Div. 1 Tract A (Parcel # 8965501000) is located adjacent to home sites on the north side of 170th Ave. SE and 173rd Ave SE. Vuemont Vista Div. 2 Tract A (Parcel # 8965510335) is located adjacent to home sites on the north side of 175th Place SE (Figure 1-3). The storm water retention pond and surrounding area to the South of Tract A, between 170th and 173rd Ave. SE, is owned and managed by the City of Bellevue.

Figure 1-2. Vuemont Native Growth Protection Area Parcels.

Figure 1-3. Vuemont Development, Divisions 1 and 2

2 EXISTING SITE CONDITIONS

2.1 Development

The Vuemont Vista development was approved by King County in July 1981, with complete build-out of the first phase occurring in 1986. Homes immediately adjacent to the NGPA tracts are located at the top of a hill slope that creates an opportunity for

extensive views from the east to the west. Homes immediately adjacent to the NGPA tracts have a view ranging from the Cascade Mountains to the east, Lake Sammamish to the north, and the downtown Bellevue skyline to the west. The view at individual residences may have restricted sightlines due to the orientation of the home, the position of adjacent homes, or the growth of vegetation over time.

The declaration of conditions, covenants, and restrictions ("CCRs") for the Vuemont Vista subdivision includes an article describing the treatment of common areas within the development. The description of common areas written for all Vuemont Vista divisions and development phases is the same. The description for Division 1, which includes NGPA Tract 1A, is provided below (Vuemont Vista, 1981).

> Common Areas. All areas in Vuemont Vista Division No. 1 which are not residential sites or streets are hereby designated "common areas" for the purposes of this Declaration. The owners of residential sites in the subdivision shall be financially responsible for the cost of maintaining the common areas *in a manner legally required by King County pursuant to a native growth protection easement of record*, to be found on the recorded plat, which maintenance shall be provided by and through Arco or its successor non-profit corporation. *Maintenance of the common areas* shall include, but is not limited to, removal of diseased or dangerous plantings and trees and removing, topping, limbing and trimming of trees *for the purpose of maintaining a view of the Cascade Mountains, Lake Sammamish and downtown Bellevue, which are rights reserved* hereunder to the owners of residential sites, Arco and its successor (emphasis added).

The Vuemont divisions were annexed by the City of Bellevue in 1995. The City of Bellevue Land Use Code prohibits tree removal within a Native Growth Protection Area unless a hazardous situation is identified by a certified arborist or the tree removal is within the context of an overall Management Plan for the NGPA tract or easement (LUC 20.25H.070C). However, the final plat documents for Vuemont Vista Divisions 1 and 2 contain specific provisions on their face for selective tree cutting. The final plat for Division 1 allows for "selected tree cutting as permitted in the Declaration of Conditions, Covenants and Restrictions," and the final plat for Division 2 allows for "selected tree cutting and removal of dangerous or diseased trees." Although the City does not recognize CCR's, it does enforce conditions that are stated on the face of the plat. As such, this provides the opportunity to develop a Vegetation Management Plan for this site. The parties agree that the future management of Vuemont Vista NGPA areas (Tract 1A and Tract 1B) within Vuemont will be managed as set forth in this agreement. By entering into this agreement, Vuemont Homeowners Association does not waive any rights or obligations that appear on the face of the final plat for Vuemont Vista Divisions 1 and 2.

2.2 Sensitive Area Overlay District

Parts of the Vuemont Vista Division 1 and 2 NGPA tracts are located within the City of Bellevue's Sensitive Area Overlay District due to the presence of streams and steep slope

areas. Division 1 Tract A (Tract 1A) is inventoried in the City of Bellevue Sensitive Areas Notebook, while Division 2 Tract A (Tract 2A) is not. The City of Bellevue requires a 50-foot top of slope setback from slopes 40% or greater in grade and a 50-foot primary setback from the top of bank for Type A streams. These areas, including their primary setbacks, are considered to be Protected Areas, according to the City of Bellevue Land Use Code.

King County has identified erosion and landslide hazards on both tracts. The City of Bellevue Land Use Code designates areas of colluvial or landslide deposit on slopes of 15 percent or more in grade, together with a primary setback of 75-feet from the toe-of-slope as protected areas.

No wetlands have been mapped for the area. As mentioned, Tract 1A is in the Sensitive Areas Notebook and Tract 2A is not. However, Tract 1A contains two streams that flow from south to north bisecting the tract in the western third and near its center. These streams have been classified as TypeA riparian corridors because they are salmon bearing streams in the mid and lower reaches and segments such as that on the Vuemont Vista property that do not contain salmon possess characteristics conducive to providing sustainable fish habitat. The eastern-most stream within Tract 1A was identified as stream 0161 as part of the 1987 Sensitive Areas Notebook inventory. Lower segments of both streams contain cutthroat trout and significant habitat for salmon. The stream segments present within Tract 1A are near the headwaters of each stream which are fed through seeps and wetlands within and adjacent to the Vuemont Vista subdivision. Type A streams together with a 50-foot setback from the top of bank are designated as protected areas (as shown in Section 2.5).

2.3 Soils

There are two primary soil associations present within the NGPA parcels; the Alderwood Association and the Beausite-Alderwood Association (SCS 1973). The two associations consist of four primary soil types mapped by the Natural Resource Conservation Service (figure 2-1). The following is a generalized description of each soil association found on the site:

AgD – Alderwood gravelly sandy loam, 15-30 percent slopes. This soil is a moderately well drained gravelly sandy loam that is commonly 40 inches deep over consolidated glacial till. Runoff is rated as medium and the erosion hazard is severe. The slippage potential of these soils is moderate. This soil is well suited for pasture and timber production, with pasturelands occurring on lower slopes. Urban development is common on this soil type as the limitation for home site development is moderate.

AkF – Alderwood and Kitsap soils, very steep. This soil is moderately well drained gravelly sandy loam approximately 24 to 40 inches deep over consolidated glacial till. This soil type varies greatly within short distances and often includes some areas of Kitsap silt loam. Drainage and permeability of this soil type varies. Runoff is rapid to very rapid, and the erosion hazard is severe to very severe. The slippage potential for this soil is severe. This soil type is primarily used for timber production.

BeC – Beausite gravelly sandy loam, 6-15 percent slopes. This soil is moderately well to well drained on gently rolling to very steep slopes. The gravelly sandy loams are approximately 20-40 inches deep over sandstone. Roots penetrate easily to the depth of bedrock and will extend in to bedrock where fractured. Permeability of this soil is rapid and available water capacity is low. Runoff is medium, and the hazard of soil erosion is moderate. This soil type is used for timber production and urban development.

BeD – Beausite gravelly sandy loam, 15-30 percent slopes. This soil is moderately well to well drained on gently rolling to very steep slopes. The gravelly sandy loams are approximately 20-40 inches deep over sandstone. Roots penetrate easily to the depth of bedrock and will extend in to bedrock where fractured. Runoff is rapid, and the hazard of soil erosion is severe. This soil type is primarily used for timber production.

Figure 2-1. Soils Types.

2.4 Topography

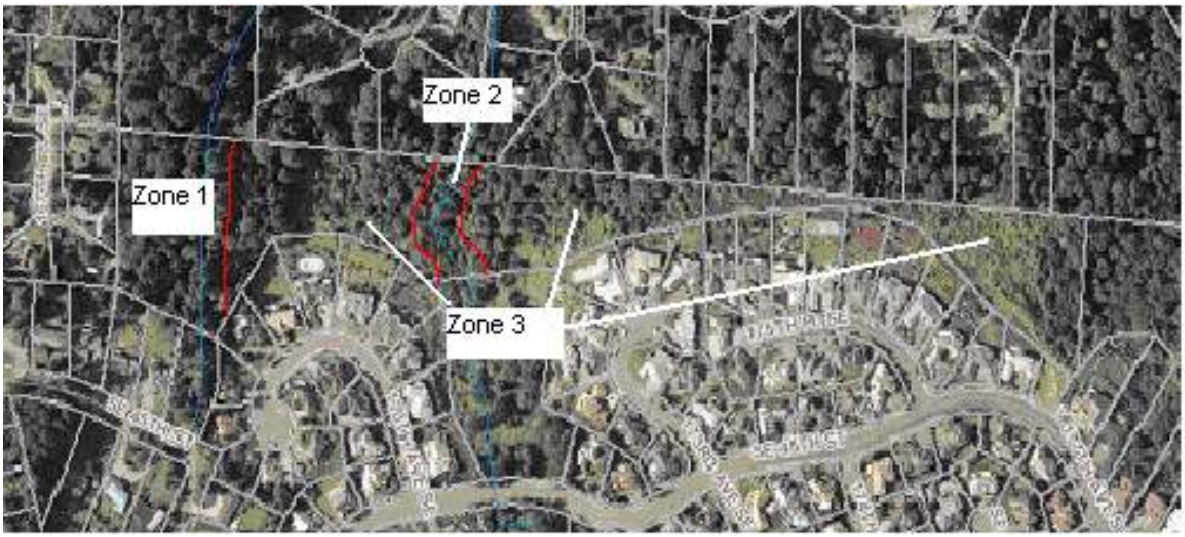
Topography of the NGPA parcels is moderately concave with the steepest slopes immediately adjacent to the home sites. The upper slopes on Tract 2A and the eastern half of Tract 1A generally range from 30 to 50 percent, and the western and lower slopes range from 10 to 30 percent. See topographic site map in the Appendix.

2.5 Vegetation

The Vuemont Vista area is within the Puget Sound trough of the western hemlock plant community zone (Franklin and Dyrness 1988). The naturally occurring vegetation in an undisturbed area would consist of an overstory tree canopy of Douglas-fir and western hemlock with western red cedar present on moist soils and along stream courses. Bigleaf maple and red alder may be present on sites that have been disturbed by forest management practices in the early 1900's as pure stands, or mixed with conifer species. The understory plant community of this forest zone will vary depending on the soil composition, permeability, density, and percent organic composition. The natural understory composition of the Vuemont Vista site would consist of sword fern and Oregon grape with salmon berry present in disturbed sites and along stream courses.

Existing vegetation in the areas surrounding the riparian corridors (see Zone1 and Zone 2 below) consists of an overstory of mid-successional mixed stand of Douglas fir and bigleaf maple. The red lines demarcate the 50-foot setback for the Type A streams. Overstory trees range from 8 inches in diameter up to approximately 16 inches in diameter. The understory vegetation in these zones is dominated by sword fern with a minor composition of Indian plum, and salmon berry, with maidenhair fern present near the stream. The plant association classification (climax plant community) for this site would be western hemlock / sword fern.

The areas identified as Zone 3 in the figure below are dominated by early successional species. The overstory bigleaf maple trees have been removed (identified from stump sprouting) by cutting, allowing for increased shrub production and the opportunity for establishment of early successional and invasive species. Existing vegetation within this zone includes bigleaf maple stump sprouts (seedling to sapling size), sword fern, Indian plum, stinging nettle, and Himalayan blackberry. Portions of this tract that were disturbed most recently have a low percent composition of the invasive Himalayan blackberry, while areas cleared more than two years ago contain a high percent composition of this invasive species.



2.6 WILDLIFE

A variety of wildlife utilizes the NGPA tracts and the associated riparian corridors within them. Wildlife most commonly seen on the site includes deer, rabbits, squirrels, rats, moles, coyotes, snakes, raccoons, and a variety of birds (starlings, flickers, Stellar's Jays, etc.).

3 MANAGEMENT PLAN GOALS

3.1 Vuemont Vista Goals

The long-term objective for managing the NGPA within the Vuemont Vista subdivision is to maintain scenic views of the Cascade Mountains, Lake Sammamish, and downtown Bellevue for the residents of the subdivision as prescribed by the declaration of conditions for the subdivision, while managing the vegetation to provide native growth and the protection of soil resources. Underlying this objective is the homeowners' desire to maintain the quality of their living environment and to protect investments made by property owners who purchased Vuemont parcels in reliance on the view rights established in the CCRs and reinforced by the Vuemont Vista plat language.

Management of the tracts has been inconsistent. The Vuemont Homeowners' Association is made up of volunteers and turnover is high, such that the individual responsible for identifying view-blocking trees and arranging for their removal will normally carry out the process once before retiring from the role. As a result, maintenance of vegetation for the preservation of views has been directed at spot treatments without a long-term strategy. This approach has also placed an emphasis on the short-term maintenance of views to a detriment to the natural vegetation and slope stability. The goal of this management plan is to identify an approach for maintaining the view rights of home owners that would not be detrimental to the native vegetation community and soil resources. This plan will identify vegetation treatments that can be used within the NGPA to maintain a native vegetation plant community and identify treatments to restore areas of invasive species to native plant communities. These treatments will also provide long-term protection and stabilization of soil resources, as well as provide habitat for wildlife and aquatic species.

3.2 City of Bellevue Goals

The City of Bellevue desires to maintain the protection of critical resources on this site while allowing the Vuemont Homeowners' Association to conduct vegetation management treatments for the purpose of maintaining protected view rights in accordance with the plat language for Vuemont Vista Divisions 1 and 2.

The City of Bellevue Land Use Code restricts activity within protected areas. The Code states, "no development, use, land alteration or activity may occur in a Protected Area or a primary setback except as specifically allowed by this Part 20.25H; provided…. Supplemental planting is permitted."

The protection of stream environments helps preserve natural storm runoff rates and infiltration and controls erosion and siltation into streams to maintain water quality. The protection of steep slopes helps maintain slope stability, erosion, and the economic value of down slope landowners. Preserving vegetation in its natural state provides habitat and food sources for wildlife, while also providing aesthetic values for people.

3.3 Regulatory Requirements

Native Growth Protection Area. The plat maps for Vuemont Vista Division 1 and Division 2 designate Tracts 1A and 2A as Native Growth Protection easements. Although the City of Bellevue Land Use Code prohibits tree removal within Native Growth Protection areas due to the presence of protected areas, the plats for both divisions contain language allowing for selective tree cutting. The final plat for Division 1 allows for "selected tree cutting as permitted in the Declaration of Conditions, Covenants and Restrictions," and the final plat for Division 2 allows for "selected tree cutting and removal of dangerous or diseased trees."

Sensitive Areas. The Bellevue Land Use Code (Bellevue City Code Title 20) establishes special standards and procedures that apply to development on any site which is in whole or in part mapped or defined as a sensitive area in the City of Bellevue Sensitive Area Notebook. Vuemont Vista Divisions 1 and 2 were annexed into the City of Bellevue after the Sensitive Areas Notebook was developed in 1987.

The following Protected Areas have been identified within Tracts 1A and 2A as described in Section 2.2 of this management plan:

- Slopes equal to or exceeding 40 percent in grade together with a 50-foot top of bank primary setback
- Areas of colluvial or landslide deposit on slopes of 15 percent or more in grade together with a 75-foot toe of slope setback
- Type A streams together with a 50-foot primary setback from the top of bank

Wildlife Habitat. Protecting wildlife habitat within the NGPA is important, based on Bellevue City Code. Short and long term management prescriptions and plans, including characterization of trees and vegetation to be removed, and restoration and revegetation plans with native species, including native species with a lower growth habit, shall demonstrate that the proposed Vegetation Management Plan will not significantly alter the forest and habitat characteristics of a site or significantly impact critical area functions of the site over time. In the event that the City desires specific trees and habitat areas be protected based on the needs of particular species of wildlife, the City shall notify Vuemont and the parties shall discuss and jointly develop an appropriate implementation plan which shall form the basis of an amendment to this Plan..

Clearing and Grading. Vegetation management activities within the NGPA must be conducted under permit. The City of Bellevue Clearing and Grading Code (BCC 23.76)

requires that a Clearing and Grading permit be obtained for any clearing within a protected area. The definition of Clearing is the act of destroying or removing vegetation by any means, including chemical, mechanical, or by hand (COB 23.76.015). Furthermore, the City's Environmental Procedures Code (BCC 22.02) designates Type A riparian corridors (including the 50-foot top of bank setback) and slopes over 40 percent in grade as critical areas. Any clearing or grading work within critical areas is required to go through State Environmental Policy Act (SEPA) review to assess impacts to the environment and determine their significance.

In order to assess the cumulative impacts of the proposed long-term management strategies under this plan, SEPA review on the management plan will be required. It is suggested that the Homeowners Association apply for a Preliminary SEPA review application to provide for a one-time SEPA review of the plan. This will allow for subsequent Clearing and Grading permit review and approval without SEPA review on each individual permit.

Prior to approval of any Clearing and Grading permit for future management activity within the tracts, the Vuemont Vista Homeowners Association must identify and stake the top of bank of the two Type A streams as well as the 50-foot primary setback from the top of bank location. This staking must be observed and/or inspected by City of Bellevue Land Use staff prior to approval of any future clearing and grading permit.

3.4 Desired Future Conditions

A desired future condition statement provides a description of the types and composition of vegetation present in the NGPA at designated time periods that would meet the view protection goals of the Vuemont homeowners while protecting Sensitive Areas identified by the City of Bellevue. The desired future condition is also constrained by the natural plant community capability of the site and the funding available from the homeowners association to conduct treatments.

Outside of the riparian corridor in Zones 1 (see Appendix A – "Significant Tree Inventory and Zone Management Map"), the desired future condition of the Vuemont Vista NGPA would include a mix of conifer and deciduous trees species in the overstory. This would provide a natural tree cover element on the site, shade to the streams, and provide cooler temperature, lower light intensity, and maintain soil moisture levels in the understory. A mixture of reduced tree sizes (diameters and heights) and planned spacing will provide views to the desired view elements of the Cascade Mountains, Lake Sammamish, and downtown Bellevue. A balance between protecting valuable environmental functions within the tract and maintaining views to meet the desires of the Vuemont Homeowners Association must be provided. This can be achieved through the establishment of view corridors within the tracts. Over the long-term the overstory species composition would be converted from early successional species (Douglas-fir, bigleaf maple, red alder) to later successional species (western hemlock and western red cedar) that are slower growing and have the ability to reproduce and grow in shaded conditions. The understory shrub species composition would be dominant to sword fern,

red huckleberry, and Oregon grape. Understory herb composition would be representative of the Douglas-fir / sword fern plant association.

At the lower-slope levels within Zones 3A and B approximately below the 570 ft mark (Lower Zone 3) and Zone 3C (see Appendix A – "Significant Tree Inventory and Zone Management Map"), a plant community comprising native tree species that have shorter heights at maturity (bitter cherry and vine maple) or maintain slower rates of height growth (western red cedar) would be present. A mixture of evergreen species and deciduous species would provide conditions for native understory shrub species that are shade tolerant, and restrict the establishment and development of early successional or invasive species that are generally intolerant of shaded conditions. Understory shrub species would be dominated by evergreen shrub and fern species. These evergreen species are usually low growing and therefore taller deciduous shrub species would be present at a mid canopy level. Understory herbaceous species composition would be similar to what would be present on the lower slope, but would include a greater composition of species that are tolerant of higher light levels and drier soil moisture conditions as a result of fewer evergreen trees in the overstory.

In Zones 3A and B above the 570 foot mark (Upper Zone 3) and Zone 3C (see Appendix A – "Significant Tree Inventory and Zone Management Map"), the vegetation composition would consist of native shrub species. Since there would be no overstory tree canopy to protect this portion of the site from high sun intensities and drier soil moisture levels (although the north facing slope reduced this effect some) the species would be shade intolerant and adapted to lower soil moisture conditions during the summer. The shrub layer would include a high concentration of evergreen shrub species to limit site conditions favorable to the establishment and development of invasive species. Understory herb species composition would be similar to what would be present on the mid-slope but would include a greater composition of species that are tolerant of higher light levels and drier soil moisture conditions.

4 TREATMENT OPTIONS – "TOOLBOX"

In order to achieve the desired future conditions described above, the following treatment options represent the range of short-term and long-term treatments available for the site. These treatment options are organized as "tools" that can be used to address the major issues of the site for transitioning from the existing conditions to the desired future conditions. There are four primary issues addressed; control of invasive blackberry, control of bigleaf maple sprouting, management of view-blocking trees, and establishment of native vegetation for visual and soil protection goals. The following section identifies each tool, zones it is to be used in, required permits, and required actions necessary in order to achieve an approvable permit. See Appendix A – "Significant Tree Inventory and Zone Management Map" for the associated map, showing the Significant Tree Inventory, Zones, and Management Tools that are proposed for use within those zones.

Issue: Presence and continued invasion of non-native blackberry

The management of invasive species for a site involves three fundamental objectives: prevention, eradication, and control. The treatment options described below are for the purposes of eradicating and providing long-term control of non-native blackberry at the site. These treatments in combination with treatments identified for establishment of native vegetation on the site would work together in preventing further invasion of this species. While the optimal scenario for non-native blackberry control would result in complete eradication of blackberry plants throughout the site, this outcome would be very difficult to achieve under this Management Plan, based upon estimated costs and required treatments. This plan focuses primarily on the long-term control of non-native blackberry within the three management units identified within Zone 3. Efforts will focus upon eradication of the non-native blackberry within the management units.

There are five general methods for controlling invasive weeds: physical, managerial, biological, chemical, and prescribed burning. Depending on the weed to be controlled, site conditions, and available funding; one or a combination of these methods may be the most effective approach to controlling the target species. Physical control includes both manual and mechanical means. Managerial control includes prescribed grazing. Biological control includes the introduction of insects or pathogens, which are selective for a particular species. Chemical control includes the application of herbicides in either a broadcast or spot application. Prescribed burning includes either broadcast or spot burn treatments. Of these five general methods, two have been selected for use at this site – physical and chemical.

Information regarding the treatment of invasive blackberry species is available at the King County Department of Natural Resources and Parks Noxious Weed Control Program (website: http://dnr.metrokc.gov/weeds) and the Nature Conservancy Invasive Species Initiative (website: http://tncweeds.ucdavis.edu).

Tool #1: Blackberry Eradication (removal) Treatments

Applicable Zones: 3A (upper and lower), 3B (upper and lower), and 3C

Permits Required: Clearing & Grading in Protected Areas (GH)

The required SEPA review required for a GH permit will be completed under a "Preliminary SEPA" to be conducted on this Management Plan as a whole.

Treatment Types: Physical Control, Chemical Control

1. Physical Control. Cutting and grubbing of re-sprouting plants through use of mechanical control (use of weed whackers with brush cutting blades) and manual control (use of machetes)

2. Chemical Control. Roundup or similar chemical treatment to kill canes. Spot application of herbicides to blackberry plants that re-sprout from existing live root stock, or to young plants developing from seed.

Required Actions: Create a site plan identifying where tool will be implemented. Clearly identify boundaries of all Zones.

Follow-up: Blackberry eradication will require establishment of native vegetation to prevent reestablishment of blackberry after treatment. See Tool #5 for process.

Issue: Re-sprouting of bigleaf maple stumps.

Bigleaf maple stump sprouts can reach heights of 15 feet and produce a crown spread of 20 feet within three years (USDA Forest Service 1990). The number of sprouts on a stump is dependent on the stump size, but may be up to 60 sprouts per stump. Effective control of bigleaf maple stumps sprouts all zones is necessary in order to provide scenic view lines within the identified view corridors for adjacent homeowners.

Tool #2: Maple Stump Sprout Eradication (removal) Treatments

Applicable Zones: 3A (upper and lower), 3B (upper and lower), and 3C

Permits Required: Clearing & Grading in Protected Areas (GH)

The required SEPA review required for a GH permit will be completed under a "Preliminary SEPA" to be conducted on this Management Plan as a whole.

Treatment Types: Physical Control, Chemical Control

1. Physical Control. Physical control of bigleaf maple stump sprouts requires persistent cutting of sprouts at regular intervals during the growing season to deplete stored food reserves in the root system.

2. Chemical Control. Stump sprouts can be prevented with the application of herbicides on freshly cut stumps.

Required Actions: Create a site plan identifying where tool will be implemented. Clearly identify boundaries of all Zones.

Follow-up: Once initial control of stump sprouting is completed, subsequent control treatments would not be necessary unless bigleaf maple seedlings become established from adjacent seed sources. Establishing an evergreen shrub canopy will prevent maple seedling establishment. See Tool #5.

Issue: Tall overstory view-blocking trees

The existing tall conifer trees, including those within the riparian areas, will continue to gain approximately 2 feet of height growth each year. In addition to height growth, crown spread (e.g., the length growth of lateral branches) will occur that may also inhibit scenic views. Two options are identified that can assist in meeting the view objectives of the homeowners association through either short-term or long-term treatments – pruning and uneven-aged stand management. It should be noted that the topping of trees is not

recommended for the health of the tree and safety of adjacent landowners; as such, no topping of trees will be permitted under this management plan.

Tool #3: Conifer Pruning: Inter-limbing and Windowing

Applicable Zones: 1B and 2 (primary zones); for use in all other zones as needed

Permits Required: Clearing & Grading in Protected Areas (GH)

The required SEPA review required for a GH permit will be completed under a "Preliminary SEPA" to be conducted on this Management Plan as a whole.

Treatment Types: Inter-limbing and Windowing

1. Inter-limbing. Pruning method used to increase the visual sight line past individual large trees. Removal of approximately one-third to one-half of the lateral branches evenly distributed throughout the crown.

2. Windowing. Pruning method used to allow a view "window" through the existing foliage of the tree's canopy. Prune and/or remove major limbs and branch whorls in sections that are obscuring a view.

Required Actions: Use the "Significant Tree Inventory and Zone Management Map" site map attached to this plan (Appendix A) as the underlying base map and create a new site plan. Clearly identify boundaries of all Zones. Identify trees that are to be inter-limbed or windowed and identify each tree by species, size (dbh), and location. Show any trees that have been inter-limbed or windowed under any previous permit submittals.

Tool #4: Uneven-aged stand management.

Applicable Zones: 1A, 3A (upper), 3B and 3C. On the whole, Tool #4 is not to be used in the riparian zones of Zone 1B and 2. However, selective application may be approved in a case-by-case basis.

Permits Required: Clearing & Grading in Protected Areas (GH)

The required SEPA review required for a GH permit will be completed under a "Preliminary SEPA" to be conducted on this Management Plan as a whole.

Treatment Type: Uneven-aged Stand Management

This approach over the long-term can reduce the height of the stands and maintain a lower average canopy height that is more desirable for scenic views. Remove the tallest overstory trees and replant replacement trees in the understory.

Required Actions:

Use the "Significant Tree Inventory and Zone Management Map" site plan (Appendix A) as the underlying base map and create a new site plan and identify each tree by species,

size (dbh), and location. Show any significant trees that have been removed or replanted under any previous permit submittals. Clearly identify boundaries of all Zones. Identify trees that are to be removed, limited to a maximum of 15% of the number of trees identified on the "Significant Tree Inventory and Zone Management Map" site plan (Appendix A) per zone. It should be noted that the 15% total is based upon the total number of trees identified *within each specific zone* and should be calculated for each zone separately, rather than as 15% of the total trees for the entire NGPA. Show the locations for 3 (three) replacement trees that will be replanted for each tree that is proposed for removal, if the replacement tree sizes are 4'-6' in height (evergreen) or 1"-2" minimum caliper (deciduous). Show the locations for 4 (four) replacement trees that will be replanted for each tree that is proposed for removal, if the replacement tree sizes are 18"-36" in height (evergreen) or 1/2" minimum caliper (deciduous). Height of 18-36 inches (evergreen) or ½" minimum caliper (deciduous) is acceptable if a 60% survival rate is maintained. Undersized plants with a fatality rate of more than 40% after two seasons will be replaced with like species meeting the minimum size requirements described in the table on page 15. Replacement trees are to be selected from the approved native vegetation list applicable to the Zone, as described under Tool #5. Use of this Tool #4 in any one Zone is limited to once every three years.

Issue: Establishing Native Vegetation

The establishment of appropriate native plant species to achieve long-term management goals will provide habitat for wildlife species that use the site and will result in the lowest cost approach over the long-term for maintaining the site for visual and soil protection goals. The following species are recommended to create a plant community at different levels of the slope to meet the long-term objectives. Some of these species are currently present on the site. The lists provided in the next section highlight select recommendations, but should not be construed to be all-inclusive. It remains at the City's discretion to substitute appropriate native plants when necessary to achieve optimal site conditions, within the parameters of the management plan objectives. Evergreen species would be selected over deciduous species in order to maintain year-round shade at the soil level and prevent establishment of invasive species, which are generally not tolerant of shaded conditions. The density of the species occupying the upper-slope area should be sufficient to establish full occupancy of the site and prevent the re-establishment of invasive weeds. The establishment of shade tolerant conifers in the understory of the lower slope will provide replacement trees in future years when overstory trees are removed to achieve visual goals.

Tool #5: Native Vegetation Establishment

Applicable Zones: All

Permits Required: Clearing & Grading in Protected Areas (GH)

The required SEPA review required for a GH permit will be completed under a "Preliminary SEPA" to be conducted on this Management Plan as a whole.

Treatment Type: Native Vegetation Establishment

The planting of native vegetation is to be conducted following the initial treatment to control invasive blackberries (Tool #1) and bigleaf maple sprouting (Tool #2), and in connection with uneven-aged stand management (Tool #4).

Planting density will be dependent on the individual species purchased for the specific Zone, and also on the density of existing healthy plants of the preferred species.

Required Actions: After Tool #1 and/or Tool #2 have been implemented in a specific Zone or when Tool #4 is proposed for a zone, use the site plan created for use with that tool as the underlying base map and create a new site plan. Clearly identify boundaries of all Zones. Identify location, species, spacing, and size for all native vegetation to be planted. Select and plant native vegetation appropriate for each Zone, based on the planting list approved for that Zone.

Native vegetation establishment proposals must reasonably adhere to the following general guidelines:

Vegetation Type	Minimum Size*	Planting Spacing
Trees – Evergreen	4' – 6' in height	10' – 15' on center from other trees
Trees - Deciduous	1" – 2" minimum caliper	10' – 15' on center from other trees
Shrubs	1-gallon pots	3' – 5' on center from other shrubs

* Height of 18-36 inches (evergreen) or ½" minimum caliper (deciduous) is acceptable if a 60% survival rate is maintained. Undersized plants with a fatality rate of more than 40% after two seasons will be replaced with like species meeting the minimum size requirements above.

Plant Lists:

All the species listed in the following sections are native to western Washington and the Puget Sound geographic zone. They should survive the seasonal wet and dry periods throughout the year without any maintenance actions once they are established. Planting some of these species in the spring may require supplemental watering during the first summer to ensure survival during low soil moisture conditions. Root systems for these species would be fully developed and not require supplemental watering after one year. Using container plants, or planting these species in the fall, would allow the development of a better rooting system prior to the first summer dry period and assist with their survival without supplemental watering.

Zone 3 (Upper)

The long-term objective for the areas in Upper Zone 3 (above approximately 570 feet elevation – *see* Appendix) is to establish and maintain low growing evergreen shrub species that would not restrict visual sight lines, would provide soil stability, and would restrict the ability of invasive species to become established and colonize the site. Native

species that would be desirable for the site are listed below. If these species currently exist on the site they should be protected during treatment to control invasive blackberry if possible. If these species are not currently on the site they could be established by planting container or bare-root stock. Oregon grape and salal produce extensive rooting systems and sprout new plants via rhizomes and therefore provide good stability of the upper soil layers and a dense shrub canopy layer. The evergreen shrubs listed below are understory plants and will not survive without canopy to provide shade. Due to the exposed nature of this slope, each planting proposal should demonstrate that the number of medium height deciduous shrubs is adequate to establish or maintain a shady canopy layer under which the evergreen shrubs can be planted such that they will survive and to shade out invasives such as Himalayan blackberry.

Plant List: Upper Zone 3

Common Name	Species	Vegetative Characteristics
Oregon grape	*Berberis nervosa*	Low growing evergreen shrub.
Salal	*Gaultheria shallon*	Low growing evergreen shrub.
Evergreen huckleberry	*Vaccinium ovatum*	Low growing evergreen shrub.
Indian plum	*Oemleria cerasiformis*	Medium height deciduous shrub.
Oceanspray	*Holodiscus discolor*	Medium height deciduous shrub.
Hazelnut	*Corylus cornuta*	Medium height deciduous shrub.

Zone 3 (Lower) and Zone 1A

The long-term objective of the lower slope areas of Zone 3 (below 570 feet elevation) is to establish a moderate height shrub and tree community that includes a high amount of evergreen shrubs that would restrict the establishment of invasive species, while providing a taller and more diverse plant community (compared to the upper slope area) that does not overly restrict visual sight lines within the designated view corridors. The species listed below would be acceptable or planting or maintaining in this area. In addition, any species listed for the upper slope area could also be included in the plant community established in these zones.

Plant List: Lower Zone 3 and Zone 1A

Common Name	Species	Vegetative Characteristics
Snowbrush	*Ceanothus velutinus*	Medium height evergreen shrub.
Pacific rhododendron	*Rhododendron macrophylum*	Medium height evergreen shrub.
Fool's huckleberry	*Menziesia ferruginea*	Medium height deciduous shrub.
Vine maple	*Acer cininatum*	Tall deciduous shrub.
Sitka alder	*Alnus sinuata*	Tall deciduous shrub.
Red elderberry	*Sambucus racemosa*	Tall deciduous shrub.
Indian plum	*Oemleria cerasiformis*	Medium height deciduous shrub.
Bitter cherry	*Prunus emarginata*	Medium height deciduous tree.
Shore pine	*Pinus contorta*	Medium height evergreen tree.

Scouler's willow	*Salix scouleriana*	Medium height deciduous tree appropriate for planting along stream.
Western red cedar	*Thuja plicata*	Shade tolerant evergreen conifer tree.
Western hemlock	*Tsuga heterophylla*	Shade tolerant evergreen conifer tree.
Pacific dogwood	*Cornus nuttallii*	Medium to large deciduous tree.

Zones 1B and 2 (Stream Environments)

The long-term objective for the sensitive areas within Zones 1B and 2 is to maintain a mixed conifer and deciduous forest. The overstory tree composition is expected to transition over time from its existing condition to include late successional species that would initially grow underneath the existing overstory canopy. Successful reproduction of these shade tolerant species would allow for continued development and maintenance of a forest canopy, while also allowing for the selective removal and/or inter-limbing of taller trees on a case-by-case basis. The species listed below would be acceptable for planting or maintaining in this area. In addition, any species listed for Zone 3 lower-slope and upper slope areas could also be include in the plant community established in the lower slope zone.

Plant List: Zones 1B and 2 (Stream Environments)

Common Name	Species	Vegetative Characteristics
Western red cedar	*Thuja plicata*	Shade tolerant evergreen conifer tree.
Western hemlock	*Tsuga heterophylla*	Shade tolerant evergreen conifer tree.
Pacific dogwood	*Cornus nuttallii*	Medium to large deciduous tree.

5 IMPLEMENTATION

The following table summarizes the treatment options, or tools, to be applied to each management zone.

Zone \ Tool	1 Blackberry Eradication	2 Maple Stump Control	3 Inter-limbing & Windowing	4 Uneven-aged Stand Management	5 Vegetation Establishment
1A			**X**	**X**	**X**
1B*			**X**		**X**
2*			**X**		**X**
3A	**X**	**X**	**X**	**X**	**X**
3B	**X**	**X**	**X**	**X**	**X**
3C	**X**	**X**	**X**	**X**	**X**

*Zones 1B and 2 comprise stream corridors and 50-foot setbacks from top-of-bank

Treatment Schedule

The table below provides a sample schedule for conducting treatments on the management zones. This example is provided as a guideline for timing of treatments in relation to each other and not as a specified schedule. The timing of actual treatments will be driven by perceived need and budgetary considerations. Constraints on schedule flexibility include i) the three-year waiting period between Tool #4 treatments in any given zone and ii) the requirement that Tool #5 treatments follow any removal of vegetation. Also, all plantings should take place during the dormant season in order to increase survivability.

Prop #	Zones	Tools	Proposal Description	Time Period
1	3A-C	1,2,5	Physical & chemical treatment of invasive blackberry and maple stump sprouts. Establish native species after treatments.	Year 1
2	3A	4,5	Remove 15% overstory from Zone 3A. Plant replacement trees.	Year 2
3	3B	4,5	Remove 15% overstory from Zone 3B. Plant replacement trees.	Year 3
4	1A	4,5	Remove 15% overstory from Zone 1A. Plant replacement trees.	Year 4
5	2	3	Inter-limb/window Zone 2	Year 2
6	1B	3	Inter-limb/window Zone 1B	Year 5
7	3A	4,5	Remove 15% overstory from Zone 3A. Plant replacement trees.	Year 5
8	3B	4,5	Remove 15% overstory from Zone 3B. Plant replacement trees.	Year 6
9	1A	4,5	Remove 15% overstory from Zone 1A. Plant replacement trees.	Year 7

Monitoring and Compliance

Prior to issuance or approval of any permits, City staff will need to conduct a site inspection to confirm that there are surviving trees and vegetation from the most recently permitted planting cycle. Replacement trees will be required as necessary in order to achieve an acceptable level of survivorship. After reviewing the on the ground results of the planting cycles, based upon the tree replacement survival rates, the City will have the option to change the tree replacement ratio in order to sufficiently meet the needs of the site. Additionally, every five years the City of Bellevue will reevaluate the success of the project and the underlying principles of the Vegetation Management Plan. If necessary, adjustments may be made in order to best achieve the goals of the plan.

6. REFERENCES

Franklin, Jerry F. and C.T. Dyrness. 1988. Natural Vegetation of Oregon and Washington. Oregon State University Press.

SCS. 1973. Soil Survey of King County Area, Washington. Prepared by Dale E. Snyder, Philip S. Gale, and Russell F. Pringle. US Department of Agriculture, Soil Conservation Service. November 1973.

USDA Forest Service. 1990. Silvics of North America; Volume 2, Hardwoods. Agriculture Handbook 654. US Department of Agriculture, Forest Service, Washington DC.

Vuemont Vista. 1981. Declaration of Conditions Covenants and Restrictions for Vuemont Vista Division No. 1, Phase 1. Available at internet site www.vuemont.org. Accessed on 7/19/2005.

7. APPENDIX

TOPOGRAPHIC SITE MAP

SIGNIFICANT TREE INVENTORY AND ZONE MANAGEMENT MAP (TRACTS 1A AND 2A)

SIGNIFICANT TREE INVENTORY DATA TABLE

August 1, 2016

Alison Evans
Vuemont HOA
Via email: alisonbevans@gmail.com

Re: Vuemont HOA Property, Wetland & Stream Reconnaissance Report
The Watershed Company Reference Number: 160536

Dear Alison:

On July 25, 2016, ecologist, Anna Hoenig, visited the on the Vuemont HOA greenbelt located between 171st Avenue SE and SE 45th Street in City of Bellevue (Parcel #8965501010) to screen for jurisdictional wetland and streams. This letter summarizes the findings of this study and details applicable federal, state, and local regulations. The following attachments are included:

- Wetland and Stream Reconnaissance Sketch
- Wetland Determination Data Forms
- Ecology Rating Forms

Methods

Public-domain information on the subject properties was reviewed for this reconnaissance study. These sources include USDA Natural Resources Conservation Service Soil maps, U.S. Fish and Wildlife Service National Wetland Inventory maps, Washington Department of Fish and Wildlife interactive mapping programs (PHS on the Web, SalmonScape), Washington State Department of Natural Resources Forest Practices Application Review System (FPARS) mapping tool, King County's GIS mapping website (iMAP), NWmaps.net, and Bellevue's drainage basins map.

The study area was evaluated for wetlands using methodology from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (Regional Supplement) (US Army Corps of Engineers [Corps] May 2010). The wetland boundaries are determined on the basis of an examination of vegetation, soils, and hydrology. Areas meeting the criteria set forth in the Regional Supplement are determined to be wetland. Soil, vegetation, and hydrologic parameters were sampled at several locations along the wetland boundary to make the determination. Data points on-site are marked with yellow- and black-striped flags. Data were recorded at two of these locations.

Identified wetlands within the property were classified using the *2004 Western Washington Wetland Rating System (Ecology Publication 04-06-025)* (Rating System).

The ordinary high water mark (OHWM) was evaluated based on the definition provided by the Washington Department of Fish and Wildlife and WAC 173-22-030. The OHWM is located by examining the bed and bank physical characteristics and vegetation to ascertain the water elevation for mean annual floods.

Findings

The Vuemont HOA greenbelt is located within the Cedar-Sammamish Water Resource Inventory Area (WRIA 8); West Lake Sammamish drainage basin, Section 13, Township 24N, Range 05W. The parcel is zoned R 3.5 within the Eastgate neighborhood of Bellevue and is located approximately 0.6 miles southwest of Lake Sammamish.

The parcel is located within a ravine, which generally slopes down to the north towards Lake Sammamish. It is undeveloped and is surrounded on all sides by single family residences. Common vegetation observed in non-wetland areas include black cottonwood, bigleaf maple, vine maple, swordfern, beaked hazelnut and English ivy. Several large black cottonwood trees within the parcel have been felled; the creation of snags and downed logs was evident (Figure 1). One wetland and one stream were identified on-site.

Figure 1. Snags, downed logs and woody debris were observed with the wetland and its buffers.

Wetland A

Wetland A has a slope and riverine hydrogeomorphic (HGM) classification and contains a forested Cowardin vegetation class (Figure 2). Hydroperiods within the wetland consist of permanent and seasonally flooding, saturation and a permanently flowing stream (Stream A). Vegetation within the wetland consists of black cottonwood, western red cedar, red alder, salmonberry, vine maple, Himalayan blackberry, lady fern, piggyback, skunk cabbage and English ivy. Hydrophytic vegetation on western slopes of the ravine transitions to predominantly red alder, salmonberry, Himalayan blackberry, reed canarygrass, giant horsetail, largeleaf avens and trailing blackberry. Wetland soils near ponded areas that form the start of the stream have a low chroma (≤2) with redoximorphic features, meeting the hydric soil indicator, Redox Dark Surface (F6). Hydric soils on the western slope are characterized by a low chroma upper layer and a lower depleted layer, both with redoximorphic features. Wetland hydrology was confirmed with Saturation (A3) to the surface and a High Water table (A2) near the stream.

Figure 2. Central section of wetland A.

Stream A

Stream A is named stream 0162 or 0161 according to NWmaps.net and King County iMAP, respectively. Stream A's headwaters appear to start within Wetland A. The stream becomes permanently flowing further downstream within the study parcel. The stream flows relatively straight through the ravine with an average width of two feet and widens to approximately 5 feet before it narrows once again and meanders slightly before exiting the parcel through a culvert under SE 45th Street. The visible sections of

the streambed substrate were soil with a few exposed cobble and gravel; much of the stream was covered in iron-oxide deposits at the time of the visit. According to Washington State DNR FPARS map and Bellevue's South Sammamish Area Drainage Basin map, Stream A is a non-fishbearing stream.

Figure 3. Stream A becomes more defined at lower elevations.

Local Regulations

Critical areas in the City of Bellevue are regulated in the Bellevue Land Use Code (LUC), Part 20.25H Critical Areas Overlay District.

According to LUC 20.25H.095, wetlands are classified based on the 2004 Rating System (Hruby). Wetland buffers are based upon the wetland rating and associated habitat score, the size of the wetland, and whether or not the wetlands are developed. Under the LUC wetland regulations, developed is defined as when a parcel has been previously recorded with a NGPE prior to August 1, 2006. Wetland A does not occur on or is not adjacent to parcels with an NGPE, so they are all considered undeveloped under the LUC. Wetland buffers are measured perpendicular from the wetland edge. Wetland A scored 20 points for water quality, 32 points for hydrologic function, and 19 points for habitat, for a total of 71 points. This classifies Wetland A as a Category I wetland (Table 1). Category 1 wetlands with a low water quality and low habitat scores require a standard buffer width of 75-feet.

Stream critical areas are regulated in the City of Bellevue under LUC 20.25H – Critical Areas Ordinance. Streams are classified based on status as Shoreline of the State,

whether or not the channel contains fish use or fish habitat, and whether or not the stream is physically connected by an aboveground channel system, stream or wetland. Stream buffers are measured from the top-of-bank and are based on stream classification and whether or not a parcel is considered developed. The definition of developed is different for streams than as it is described above for wetlands. For streams, the LUC defines developed as whether a parcel contains an NGPE approved prior to August 1, 2006 or a primary structure. The study parcel does not have a recorded NGPE or contain any structures, so is considered undeveloped. According to Bellevue's South Sammamish Area Drainage Basin map, Stream A is classified as a non-fishbearing, Type-N stream. Type N streams receive a standard buffer width of 50-feet.

Table 1. Summary of wetland rating results and standard buffer widths.

Critical Area	2004 Wetland Rating System				Category/Type	Standard buffer width (ft)
	Water quality	*Hydrologic*	*Habitat*	*Total*		
Wetland A	20	32	19	71	I	75
Stream A	-	-	-	-	N-type	50

Within a critical area or its buffer, removal of hazard trees is allowed if it is hazardous, poses a threat to public safety or poses an imminent risk of damaging existing structures, public or private roads/sidewalks, or other permanent improvement [LUC 20.25H.055C.(i.ii)]. A Critical Areas Land Use Permit or a Vegetation Management Plan is not required provided that hazard trees are:

> (A) Documented by a certified arborist, registered landscape architect or professional forested and includes a replanting schedule;
>
> (B) If tree pruning and crow thinning is not sufficient, as justified by a qualified professional, trees should be converted to wildlife snags or removed if no other option exists.
>
> (C) All cut vegetation is to be left within the critical area or buffer unless cut vegetation is a fire hazard or may transmit disease or pests to other healthy vegetation;
>
> (D) A restoration plan meeting the requirements of LUC 20.25H.210 is required to replace removed trees;

(E) If a tree with critical habitat, such as an eagle perch, is to be removed, a qualified wildlife biologist should determine timing and methods for removal to minimize impacts; and

(F) Hazard trees that pose an imminent threat or danger to public health or safety, to public or private property, or of serious environmental degradation may be removed or pruned by the landowner prior to receiving the required permits if the landowner makes reasonable efforts to notify the City, and within 14 days, the landowner submits a restoration plan that demonstrates compliance with the Code.

State and Federal Regulations

Wetlands are also regulated by the Corps under section 404 of the Clean Water Act. Any filling of Waters of the U.S., including wetlands (except isolated wetlands), would require notification and permits from the Corps. Note that a new Clean Water Rule for wetlands and other Waters of the U.S. went into effect in August 2015; however, the rule was recently "stayed" nationwide by the 6th Circuit Court due to pending litigation. Therefore, the prior rule is in effect until further notice. Wetland A is not isolated due to its connection to Lake Sammamish. Federally permitted actions that could affect endangered species (i.e. salmon or bull trout) may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. Application for Corps permits may also require an individual 401 Water Quality Certification and Coastal Zone Management Consistency determination from Ecology.

In general, neither the Corps nor Ecology regulates wetland buffers, unless direct impacts are proposed. When direct impacts are proposed, mitigated wetlands may be required to employ buffers based on Corps and Ecology joint regulatory guidance.

The current set of Nation Wide Permits (NWP) expire on March 18, 2017. If work is underway, or the applicant is contracted to commence construction work prior to this date, then the work may continue until March 18, 2018. If the work would not begin (or be under contract) prior to March 18, 2017, then the applicant will have to ask the Corps to confirm that the project is consistent with the newly issued NWPs. The new NWPs are likely to include minor differences from the current versions and thus this additional coordination and review time with the Corps should be factored into project schedules.

Disclaimer

The information contained in this letter or report is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the methods section. All discussions, conclusions and

recommendations reflect the best professional judgment of the author(s) and are based upon information available to us at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, State and Federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

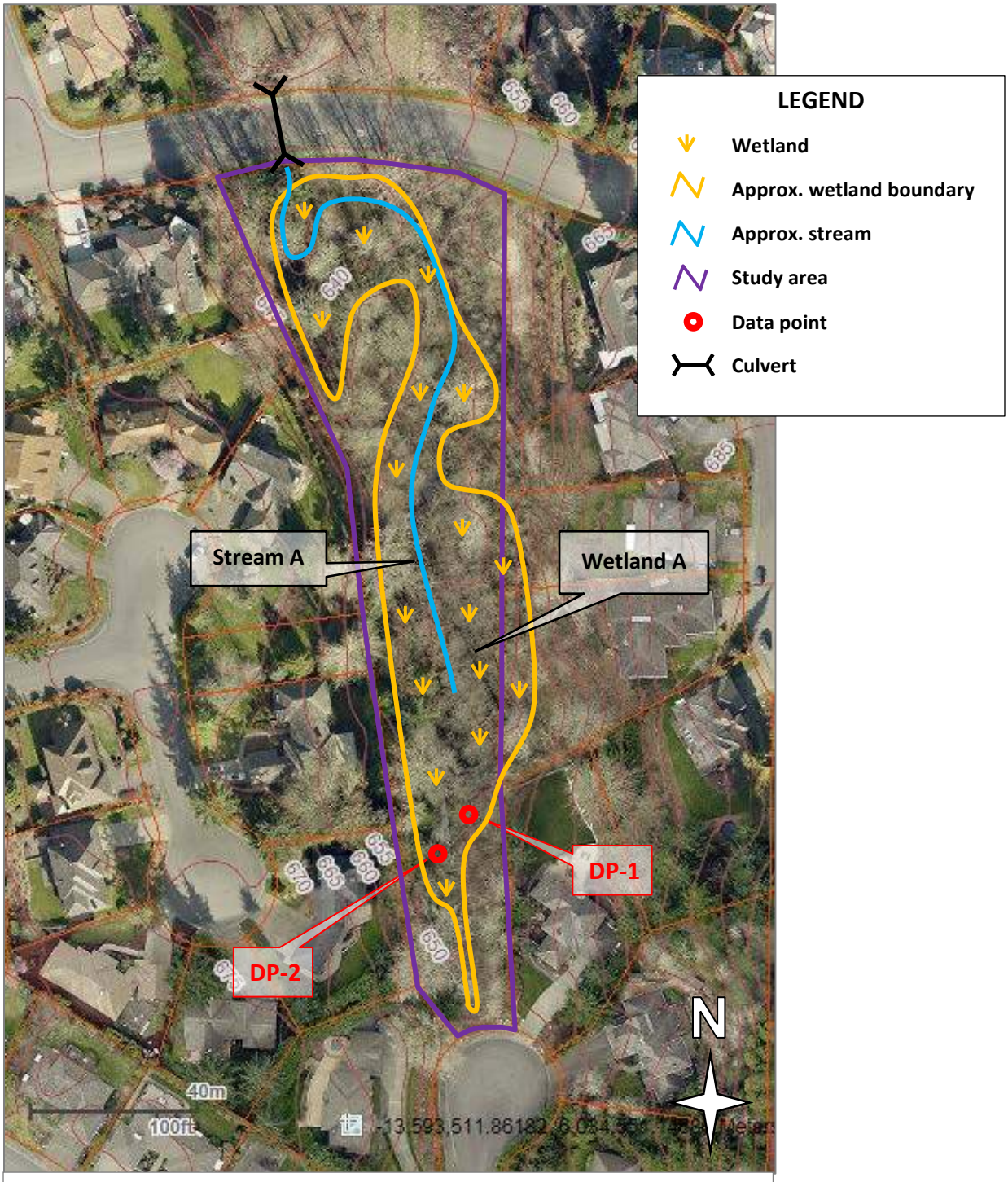
Anna Hoenig, WPIT
Ecologist

Enclosures

THE WATERSHED COMPANY
750 Sixth Street South | Kirkland | WA 98033
p 425.822.5242 f 425.827.8136

Wetland & Stream Reconnaissance Sketch
Site visit: July 25, 2016
TWC Ref. No. 160536

Parcel #8965501010
Prepared for: Alison Evans, Vuemont HOA



Note: Field sketch only. Features depicted are approximate and not to scale. Data Points are marked with yellow- and black-striped flags.

THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 1

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Vuemont HOA, PIN 8965501010**	Sampling Date:	**7/25/2016**
Applicant/Owner:	**Alison Evans, Vuemont HOA**	Sampling Point:	DP- **1**
Investigator:	**A. Hoenig**	City/County:	**Bellevue/King**
Sect., Township, Range:	S **13** T **24N** R **05W**	State:	**WA**
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): **7**	Local relief (concave, convex, none): **none**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **Beausite gravelly sandy loam, 6 to 15 percent slopes**		NWI classification: **none**	
Are climatic/hydrologic conditions on the site typical for this time of year?	☐ Yes	☒ No	(If no, explain in remarks.)
Are "Normal Circumstances" present on the site?	☒ Yes	☐ No	
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?			
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic			(If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soils Present?	Yes	☒	No	☐	**Is the Sampling Point within a Wetland?** Yes ☒ No ☐
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: **Precipitation is drier than normal according to WETS table for Seatac. Many felled trees, particularly black cottonwood, and woody debris within upper ravine. Upper ravine has high invasive plant species cover: blanket English ivy, Himalayan blackberry**

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 5m diam.)			
1. ***Alnus rubra***	**100**	**Yes**	**FAC**
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1. ***Rubus armeniacus***	**50**	**Yes**	**FAC**
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 1m diam.)			
1. ***Equisetum telmateia***	**80**	**Yes**	**FACW**
2. ***Rubus ursinus***	**60**	**Yes**	**FACU**
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	140 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**3**	(A)
Total Number of Dominant Species Across All Strata:	**4**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**75**	(A/B)

Prevalence Index Worksheet

Total % Cover of		Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

- ☒ Dominance test is > 50%
- ☐ Prevalence test is ≤ 3.0 *
- ☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants *
- ☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL **Sampling Point – DP-1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	**10YR 2/1**	**93**	**5YR 3/3**	**7**	**C**	**M**	**Gravelly sandy loam**	
10-14	**5YR 4/1**	**85**	**10YR 3/6**	**15**	**C**	**M, PL**	**Silty clay loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present?	Yes ☐	No ☒	Depth (in):
Water Table Present?	Yes ☐	No ☒	Depth (in):
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (in): **surface**

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 2

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Vuemont HOA, PIN 8965501010**	Sampling Date:	**7/25/2016**
Applicant/Owner:	**Alison Evans, Vuemont HOA**	Sampling Point:	DP- **2**
Investigator:	**A. Hoenig**	City/County:	**Bellevue/King**
Sect., Township, Range:	S **13** T **24N** R **05W**	State:	**WA**
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): **5**	Local relief (concave, convex, none): **concave**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **Beausite gravelly sandy loam, 6 to 15 percent slopes**		NWI classification: **none**	

Are climatic/hydrologic conditions on the site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks.)
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampling Point within a Wetland?**	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **Precipitation is drier than normal according to WETS table for Seatac. Located in area with felled cottonwood trees.**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Thuja plicata***	**65**	**Yes**	**FAC**
2. ***Alnus rubra***	**10**	**No**	**FAC**
3.			
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1. ***Rubus spectabilis***	**30**	**Yes**	**FAC**
2. ***Rubus armeniacus***	**10**	**Yes**	**FAC**
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1. ***Populus balsamifera* starts**	**5**	**No**	**FAC**
2. ***Hedera helix***	**15**	**Yes**	**FACU**
3. ***Rubus ursinus***	**10**	**Yes**	**FACU**
4. ***Polystichum munitum***	**5**	**No**	**FACU**
5. ***Athyrium cyclosorum***	**5**	**No**	**FAC**
6.			
7.			
8.			
9.			
10.			
11.			
	40	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum:

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across All Strata: **5** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **60** (A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

☒ Dominance test is > 50%
☐ Prevalence test is ≤ 3.0 *
☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants *
☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL **Sampling Point – DP-2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	**10YR 2/1**	**100**					**Loam**	
4-14	**2.5Y 2.5/1**	**97**	**10YR 3/6**	**3**	**C**	**M**	**Gravelly sandy loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present?	Yes ☐	No ☒	Depth (in):	
Water Table Present?	Yes ☒	No ☐	Depth (in):	**5**
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (in):	**surface**

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Vuemont HOA greenbelt, PIN 8965501010 Date of site visit: 7/25/2016

Rated by: Anna Hoenig Trained by Ecology? Yes ☒ No ☐ Date of Training 10/2015

SEC: 13 TWNSHP: 24N RNGE: 05W Is S/T/R in Appendix D? Yes ☐ No ☒

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ☒ II ☐ III ☐ IV ☐

Category I = Score ≥70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	32
Score for Hydrologic Functions	20
Score for Habitat Functions	19
TOTAL score for functions	**71**

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the "highest" category from above) **I**

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
Estuarine	☐	**Depressional**	☐
Natural Heritage Wetland	☐	**Riverine**	☒
Bog	☐	**Lake-fringe**	☐
Mature Forest	☐	**Slope**	☐
Old Growth Forest	☐	**Flats**	☐
Coastal Lagoon	☐	**Freshwater Tidal**	☐
Interdunal	☐		
None of the above	☐	Check if unit has multiple HGM classes present	☒

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal** or **plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X*
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X*
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X*
SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

***The study area was reviewed for the presence of endangered, threatened, and priority species using WDFW online Priority Habitat and Species Data, PHS on the Web (http://wdfw.wa.gov/mapping/phs/).**

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.

1. Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☐ NO – go to 2 ☐☐**YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☐ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☐NO – go to 4 ☐**YES –** The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

☒ The wetland is on a slope (*slope can be very gradual*),

☒ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☒ The water leaves the wetland **without being impounded**?

NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☐ NO – go to 5 ☐ **YES –** The wetland class is **Slope**

5. Does the entire wetland unit **meet all** of the following criteria?

☒ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☒ The overbank flooding occurs at least once every two years

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

☐ NO - go to 6 ☐ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☐ **YES –** The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES –** The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

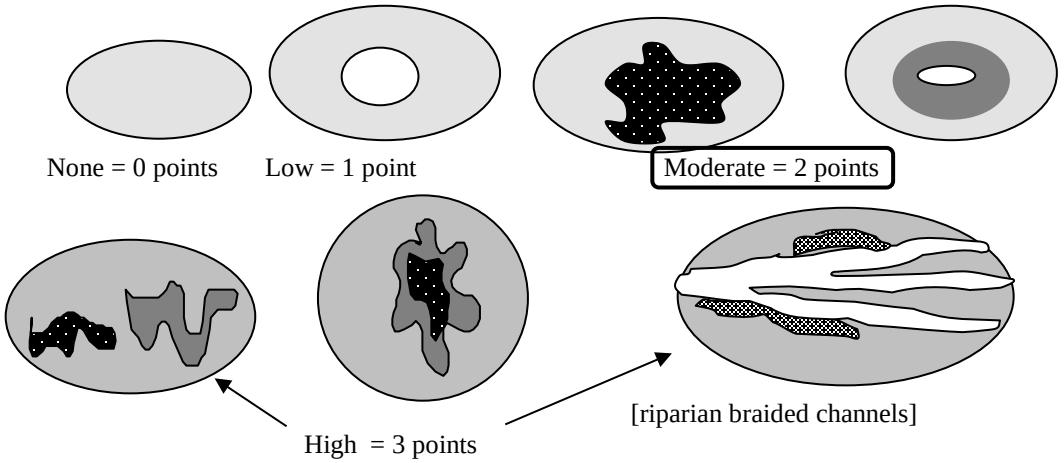
If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

R	Riverine and Freshwater Tidal Fringe Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
R	**R 1. Does the wetland have the potential to improve water quality?**	*(see p. 52)*
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: Depressions cover >3/4 area of wetland ..... points = 8 **Depressions cover > 1/2 area of wetland ..... points = 4** Depressions present but cover < 1/2 area of wetland ..... points = 2 No depressions present ..... points = 0	4
R	R 1.2 Characteristics of the vegetation in the wetland (areas with > 90% cover at person height): Forest or shrub > 2/3 the area of the wetland ..... points = 8 **Forest or shrub > 1/3 area of the wetland ..... points = 6** Ungrazed, emergent plants > 2/3 area of wetland ..... points = 6 Ungrazed emergent plants > 1/3 area of wetland ..... points = 3 Forest, shrub, and ungrazed emergent < 1/3 area of wetland ..... points = 0	6
R	**Total for R 1** *Add the points in the boxes above*	10
R	**R 2. Does the wetland have the opportunity to improve water quality?** ***(see p. 53)*** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.* ☐ Grazing in the wetland or within 150 ft ☐ Untreated stormwater discharges to wetland ☐ Tilled fields or orchards within 150 ft of wetland ☒ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, golf courses are within 150 ft of wetland ☐ The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality ☐ Other_____ **YES** multiplier is **2** **NO** multiplier is **1**	multiplier 2
R	**TOTAL - Water Quality Functions** Multiply the score from R 1 by R 2 ***Add score to table on p. 1***	**20**

Comments

R	**Riverine and Freshwater Tidal Fringe Wetlands**	
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	
	R 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?	***(see p. 54)***
R	R 3.1 Characteristics of the overbank storage the wetland provides: *Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (width of wetland)/(width of stream)* If the ratio is more than 20.....points = 9 If the ratio is between 10 – 20 .....points = 6 If the ratio is 5- <10 .....points = 4 If the ratio is 1- <5 .....points = 2 If the ratio is < 1 .....points = 1	9
R	R 3.2 Characteristics of vegetation that slow down water velocities during floods: *Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description.* (polygons need to have >90% cover at person height NOT Cowardin classes) Forest or shrub for >1/3 area OR Emergent plants > 2/3 area.....points = 7 Forest or shrub for > 1/10 area OR Emergent plants > 1/3 area.....points = 4 Vegetation does not meet above criteria.....points = 0	7
R	**Total for R 3** *Add the points in the boxes above*	16
R	**R 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** ***(see p. 57)*** Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. *Note which of the following conditions apply.* ☒ There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. ☐ There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding ☐ Other_____ *(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)* **YES** multiplier is **2** **NO** multiplier is **1**	(see p. 57) multiplier <u>2</u>
R	**TOTAL - Hydrologic Functions** Multiply the score from R 3 by R 4 ***Add score to table on p. 1***	**32**

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat**	
H 1. Does the wetland have the potential to provide habitat for many species?	
H 1.1 Vegetation structure ***(see p. 72)*** *Check the types of vegetation classes present (as defined by Cowardin) if the class is ¼ acre or covers more than 10% of the area of the wetland if unit smaller than 2.5 acres.* ☐ Aquatic bed ☐ Emergent plants ☐ Scrub/shrub (areas where shrubs have >30% cover) ☒ Forested (areas where trees have >30% cover) ☒ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:* 4 structures or more.....points = 4 3 structures.....points = 2 2 structures.....points = 1 1 structure.....points = 0	1
H 1.2. Hydroperiods ***(see p. 73)*** *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ☒ Permanently flooded or inundated — 4 or more types present .....points = 3 ☒ Seasonally flooded or inundated — 3 types present.....points = 2 ☐ Occasionally flooded or inundated — 2 types present .....points = 1 ☒ Saturated only — 1 types present…….points = 0 ☒ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ ***Lake-fringe wetland* = 2 points** ☐ ***Freshwater tidal wetland* = 2 points**	3
H 1.3. Richness of Plant Species ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle* If you counted: > 19 species.....points = 2 *List species below if you want to:* 5 - 19 species.....points = 1 < 5 species.....points = 0	2

H 1.4. Interspersion of habitats ***(see p. 76)*** Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  None = 0 points Low = 1 point Moderate = 2 points [riparian braided channels] High = 3 points NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".	2
H 1.5. Special Habitat Features: ***(see p. 77)*** *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ☒ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). ☒ Standing snags (diameter at the bottom > 4 inches) in the wetland ☒ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.*(structures for egg-laying by amphibians)* ☐ Invasive plants cover less than 25% of the wetland area in each stratum of plants *Note: The 20% stated in early printings of the manual on page 78 is an error.*	3
H 1. TOTAL Score - potential for providing habitat *Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5*	11

H 2. Does the wetland have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. (relatively undisturbed also means no-grazing) ..... Points = 5 ☐ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. ..... Points = 4 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. ..... Points = 4 ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference ..... Points = 3 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. ..... Points = 3 **If buffer does not meet any of the criteria above** ☐ No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2 ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2 ☐ Heavy grazing in buffer. ..... Points = 1 ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland ..... Points = 0 ☒ Buffer does not meet any of the criteria above……..……...Points = 1	1
H 2.2 Corridors and Connections ***(see p. 81)*** H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor*). YES = **4 points** (*go to H 2.3*) **NO** = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (*go to H 2.3*) **NO** = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	1

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*** Which of the following priority habitats are within 330ft (100m) of the wetland? *(NOTE: the connections do not have to be relatively undisturbed)* ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acres). ☐ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full description in WDFW PHS report p. 152*) ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests.) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158.)* ☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*) ☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☐ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. *(full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A.)* ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ☒ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of >51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30cm (12 in) in diameter at the largest end, and > 6m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = **0 points** *Note: All vegetated wetland are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H2.4.*	4

H 2.4 Wetland Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 84)*** There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile.....points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed.....points = 3 The wetland is Lake-fringe on a lake **with** disturbance and there are 3 other lake-fringe wetland within ½ mile.....points = 3 There is at least 1 wetland within ½ mile.....points = 2 There are no wetlands within ½ mile.....points = 0	2
H 2. TOTAL Score - opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
TOTAL for H1 from page 14	11
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	19

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate Category.

Wetland Type *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	**Category**
SC 1.0 Estuarine wetlands (*see p. 86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ☒	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-151? ☐ YES = Category I ☐ NO = go to SC 1.2	**Cat. I**
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? ☐ YES = Category I ☐ NO = Category II ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native Spartina spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II) The are aof Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed wetland. ☐ The wetland has at least 2 or the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual rating I/II**

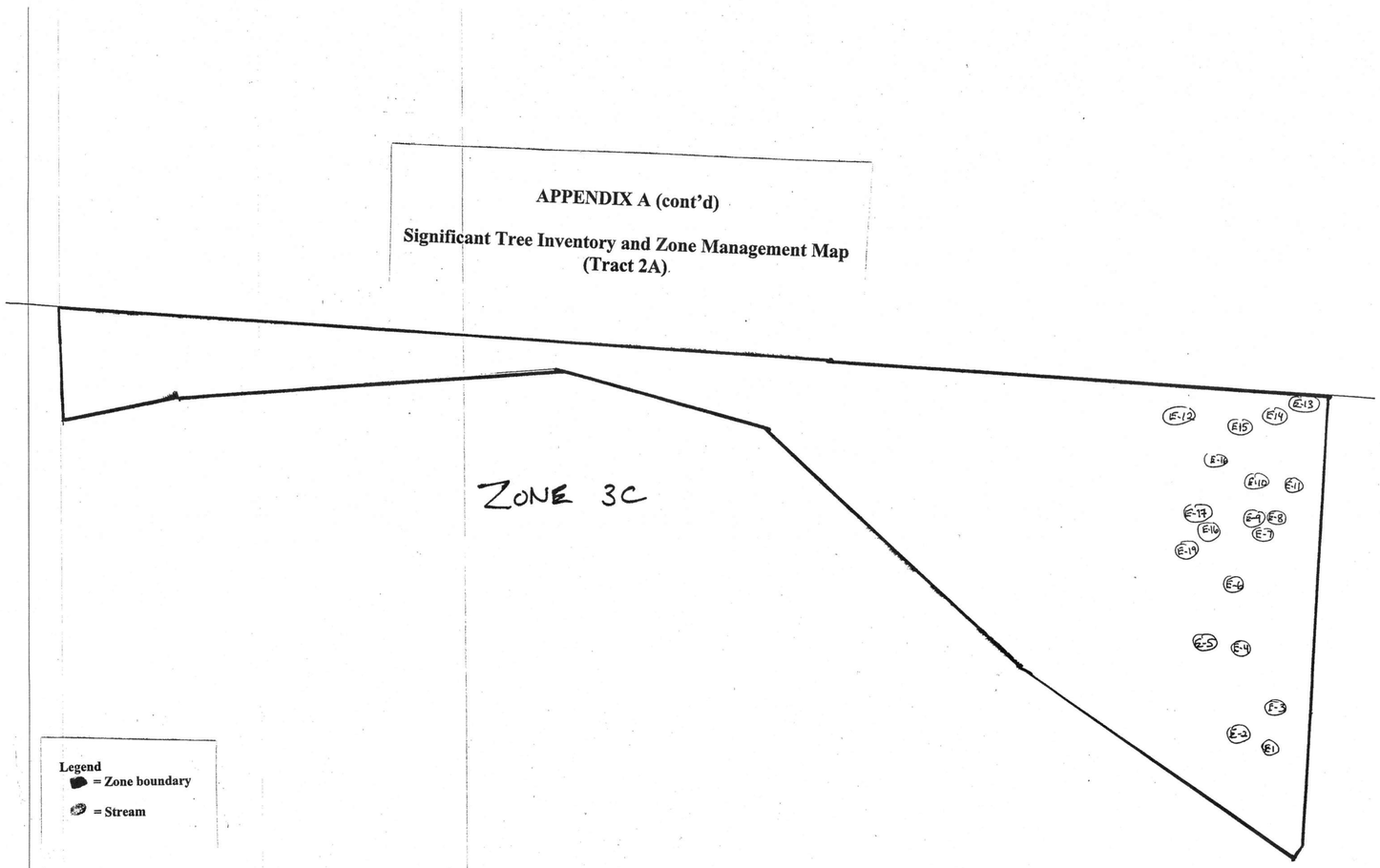
SC 2.0 Natural Heritage Wetlands ***(see p. 87)*** Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ☒ or accessed from WNHP/DNR web site ☐ YES ☐ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ☐ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO ☒ Not a Heritage Wetland	**Cat. I**
SC 3.0 Bogs ***(see p. 87)*** Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below to identify if the wetland is a bog. If you answer yes, you will still need to rate the wetland based on its functions.* 1. Does the wetland have organic soils horizons (i.e. layers of organic soil), either peats or mucks, that compose 16" or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils.) Yes - go to Q.3 NO - go to Q.2 2. Does the wetland have organic soils, either peats or mucks, that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - go to Q.3 NO ☐ is not a bog for purpose of rating 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists species in Table 3)? Yes – Is a bog for purpose of rating NO - go to Q.4 *NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.* 4. Is the wetland forested (>30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (*>30% coverage of the total shrub/herbaceous* cover)? YES = Category I NO ☒ is not a bog for purpose of rating	**Cat. I**

SC 4.0 Forested Wetlands *(see p. 90)*	
Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*	
☐ Old growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. *Note: The criterion for dbh is based on measurements for upland forests. Two hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.*	
☐ Mature forests: (west of the Cascade crest) Stands where the largest trees are 80-200 years old OR have average diameters (dbh) exceeding 21 in (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quanitity of large downed material is generally less than that found in old-growth	
YES = Category 1 NO ☒ not a forested wetland with special characteristics	**Cat. I**
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks.	
☐ The lagoon in which the wetland is located contains surgace water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)	
YES – Go to SC 5.1 NO ☒ not a wetland in a coastal lagoon	**Cat. I**
SC 5.1 Does the wetland meet all of the following three conditions?	
☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).	
☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	**Cat. II**
☐ The wetalnd is larger than 1/10 acre (4350 square feet)	
YES = Category I NO = Category II	

SC 6.0 Interdunal Wetlands (see p. 93) Is the wetalnd unit west of the 1889 line (also called the Westarn Boundary of Upland Ownership or WBUO)? YES – go to SC 6.1 NO ☐ not an interdunal wetland for rating *If you answer yes you will still need to rate the wetland based on its functions.* In practical terms that means the following geographic areas: – Long Beach Peninsula – lands west of SR 103 – Grayland-Westport – lands west of SR 105 – Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland 1 acre or larger, or is it in a mosaic of wetlands that is 1 acre or larger? YES = Category II NO – go to SC 6.2 SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
Category of wetland based on Special Characteristics *Choose the "highest" rating if wetland falls into several categorie, and record on p. 1 .* If you answered NO for all types enter "Not Applicable" on p.1.	**NA**

APPENDIX A (cont'd)

Significant Tree Inventory and Zone Management Map (Tract 2A)



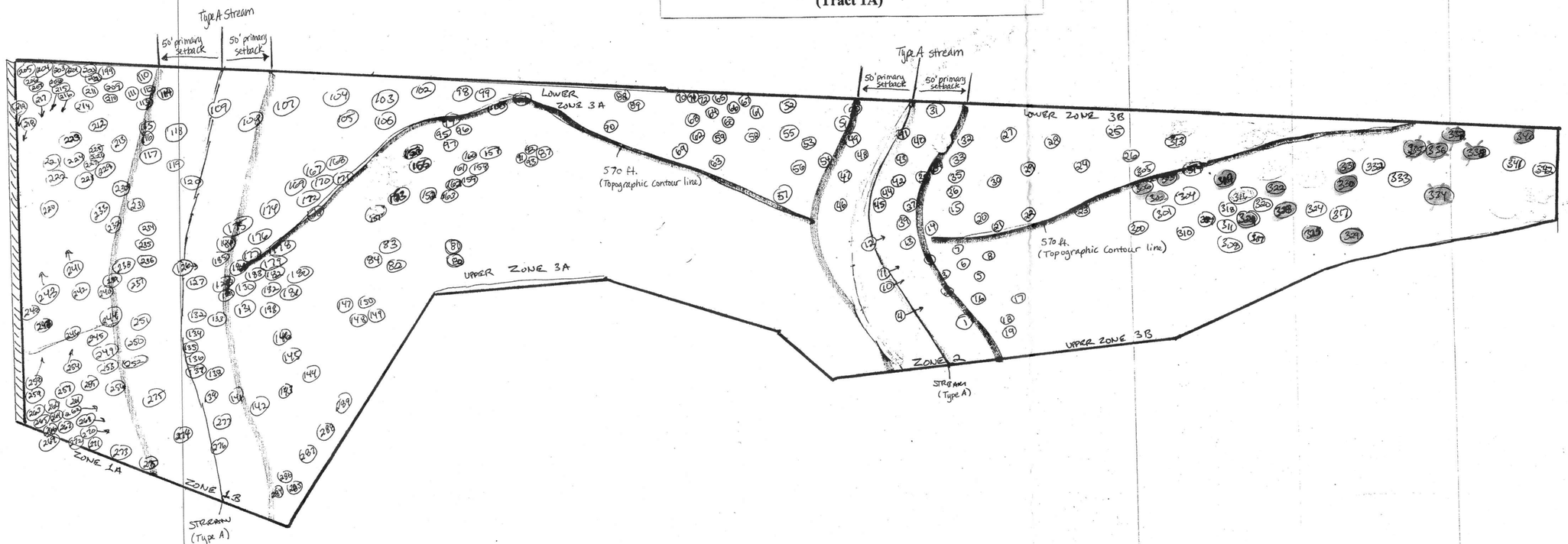
Legend
- = Zone boundary
- = Stream

Legend – Tools Used per Zone

Zone 1A: 3 (as needed), 4, 5
Zone 1B: 3, *4 (rarely on case-by-case basis only)*, 5
Zone 2: 3, *4 (rarely on case-by-case basis only)*, 5
Zone 3A (upper): 1, 2, 3 (as needed), 4, 5
Zone 3A (lower): 1, 2, 3 (as needed), 5
Zone 3B (upper): 1, 2, 3 (as needed), 4, 5
Zone 3B (lower): 1, 2, 3 (as needed), 4, 5
Zone 3C: 1, 2, 3 (as needed), 4, 5

APPENDIX A

Significant Tree Inventory and Zone Management Map (Tract 1A)



Legend
= Zone boundary
= Stream